- Figure 7-2, Site and Grading Plan;
- Figures 7-3 and 7-4, Floor Plan, Elevations, and Sections;
- Figure 7-5, Foundation Plan and Details;
- Figure 7-6, Plumbing Plan;
- Figure 7-7, Electrical Plan;
- Figure 7-8, Chemical Storage Shelter Plan; and
- Figure 7-9, Tank Secondary Containment Plan.

PCB Waste Storage: Containers with PCB wastes are typically shipped offsite within 30 days of generation and are managed in accordance with Toxic Substances Control Act (TSCA) and applicable state regulations. If it is necessary to store a drum longer than 30 days, it is stored in Storage Facility (2233) Shed O that is specifically designated for PCB wastes storage and meets the containment requirements under TSCA. When PCB wastes are stored in Shed O, all other wastes are removed from Shed O.

Radioactive Waste Storage: Mixed waste stream 58-E (thorium-containing materials) contains a radioactive component. This waste stream will not be stored at the Storage Facility (2233). Radioactive wastes will be stored at the point of generation and held for no longer than 90 days. When it comes time to ship radioactive wastes, they will be shipped from the point of generation.

7.1.1 Container Description

Wastes are delivered to the Storage Facility (2233) in a number of different sizes and types of containers including, but not limited to, drums, bins, bottles, cartons, and cans. These wastes may be subsequently repackaged into DOT-approved containers for storage and shipment. These containers include, but are not limited to, steel drums, lined steel drums, fiber drums, cubic yard boxes, cardboard boxes, or wood boxes. Other containers used for limited storage prior to repackaging include, but are not limited to, glass bottles, plastic bottles, plastic cartons, and metal cans.

A number of different types and sizes of containers are used for storage and shipment of hazardous waste. The following is a list of the major types and sizes of containers typically used and stored at the Storage Facility (2233) at any given time. The number of containers shown below represents the maximum number of each type of container that could possibly be stored at any given time based on facility capacity and containment design. According to the Hazardous Waste Facility Permit, a maximum of four hundred 55-gallon drums and 200 cubic yards of DOT roll-off/bins of hazardous waste can be stored at any one time in the Storage Facility (2233). Table 7-2 shows the typical sizes and types of containers that are stored in each designated storage area.

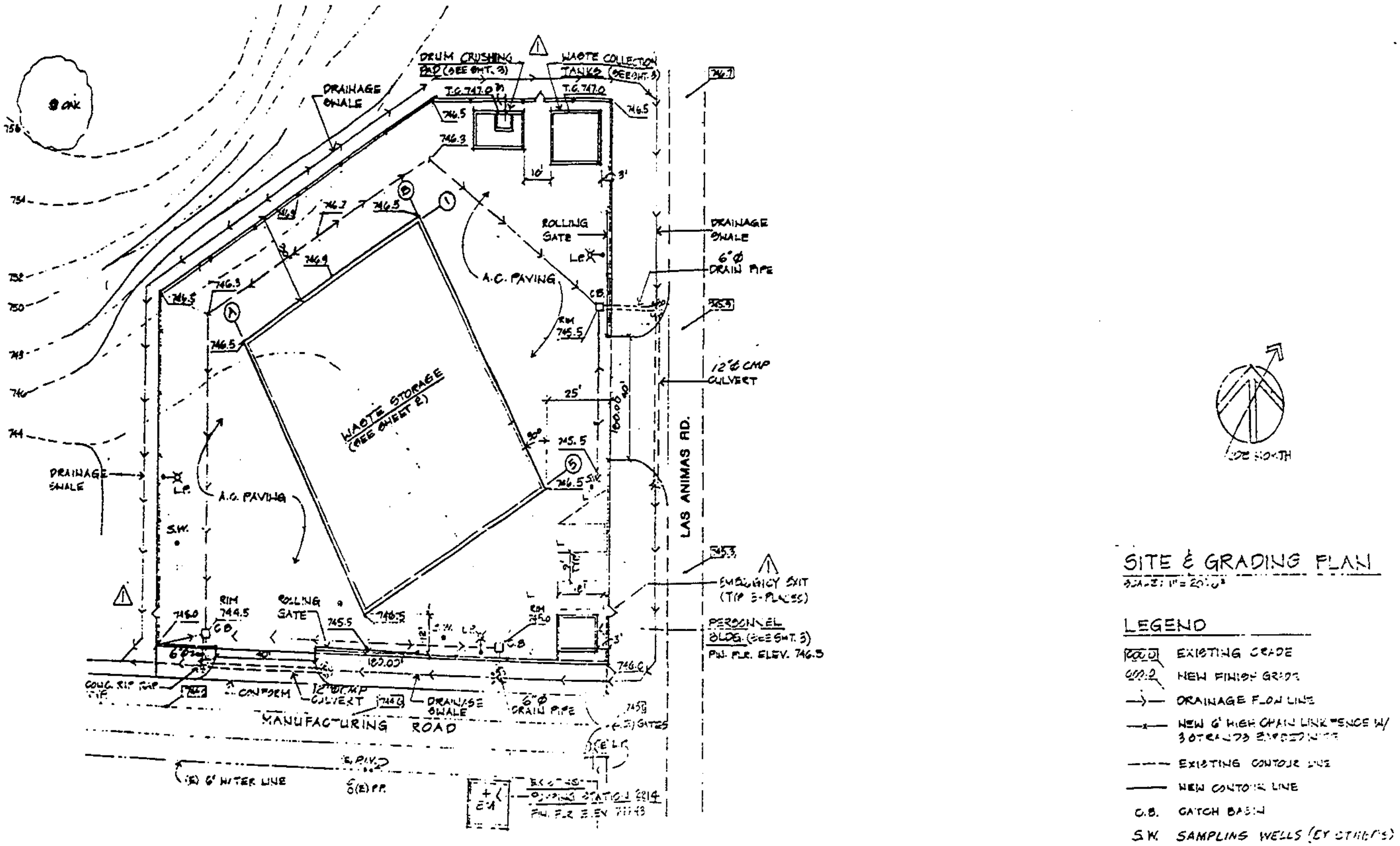


FIGURE 7-2
Storage Facility (2233)
Site and Grading Plan

SOURCE: UTC, Drawing # 2233A-C1-1, August 1994

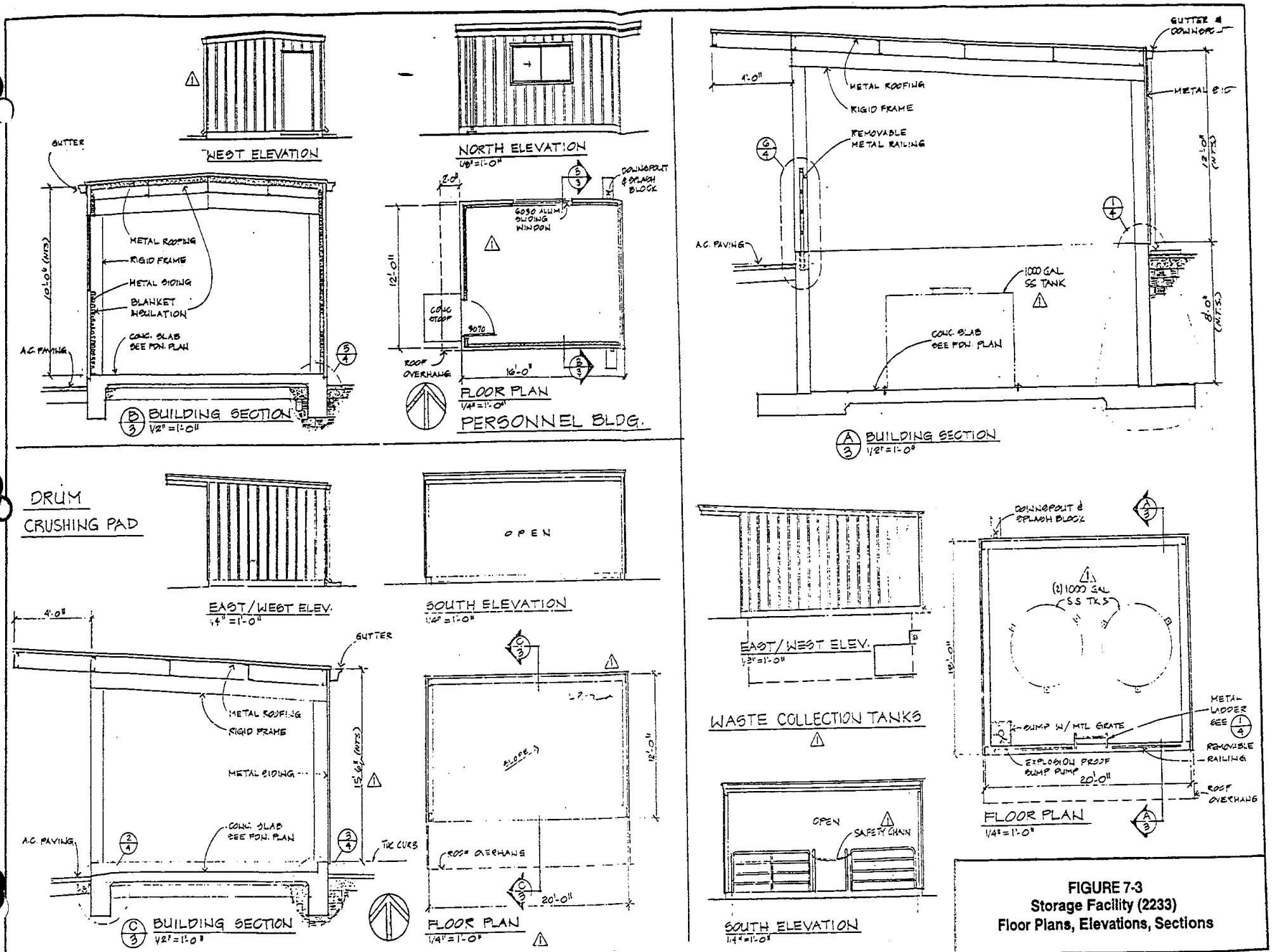
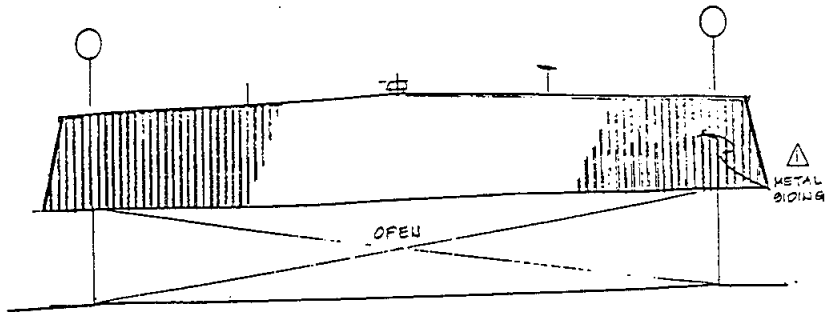
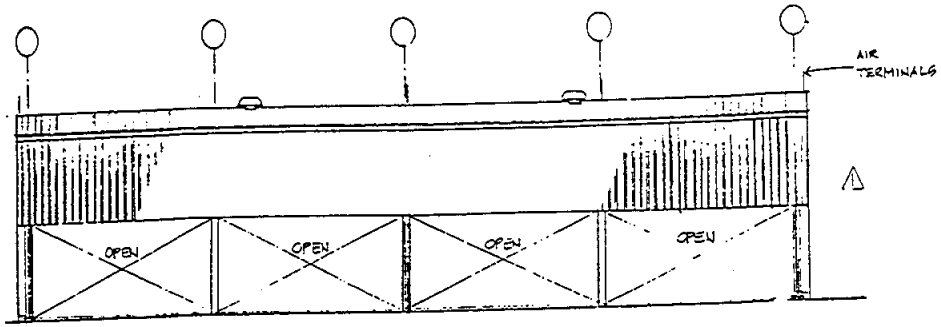


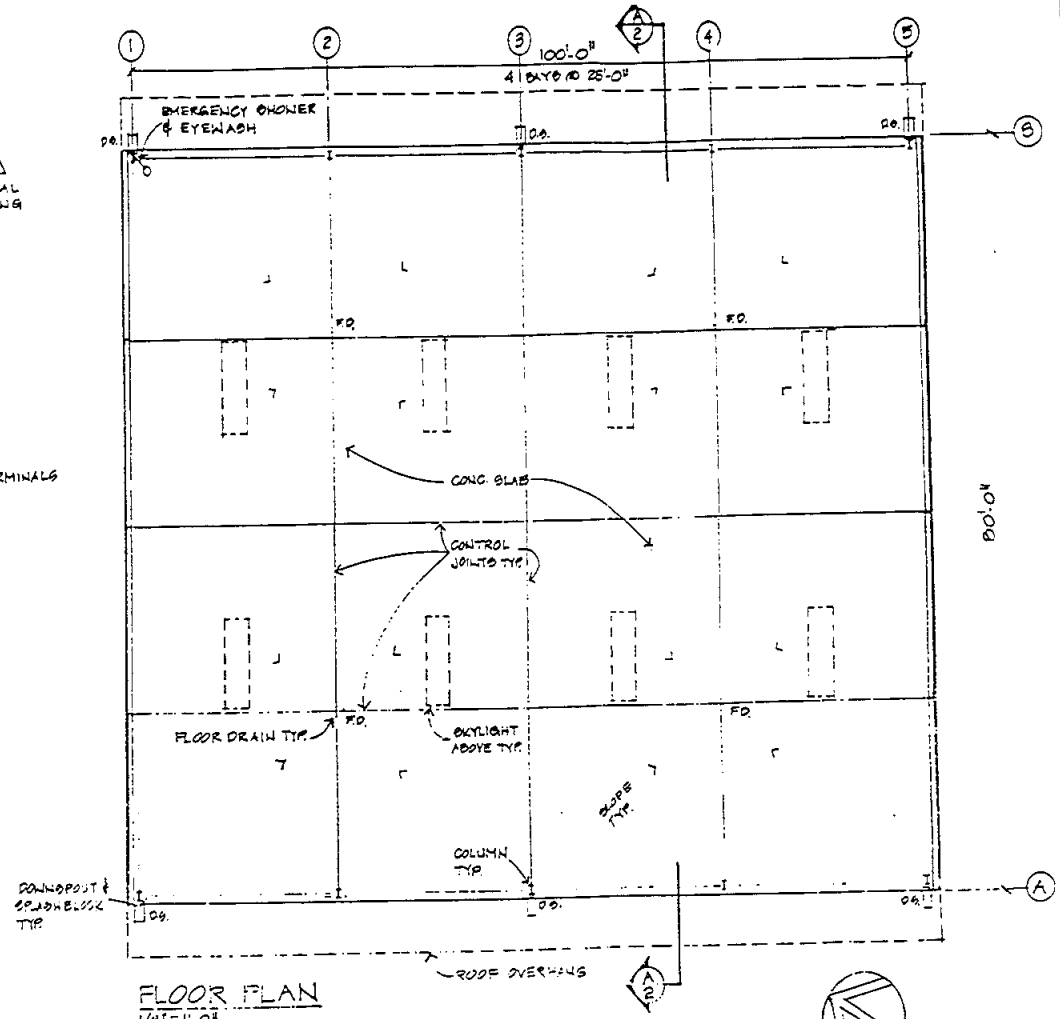
FIGURE 7-3
Storage Facility (2233)
Floor Plans, Elevations, Sections



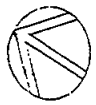
NORTHWEST/SOUTHEAST ELEVATION
1/8"=1'-0"

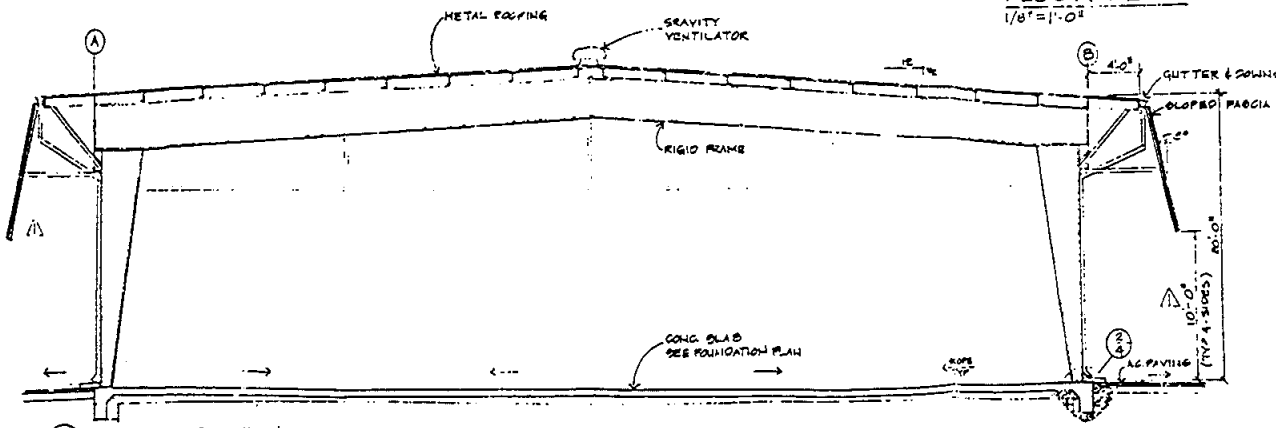


SOUTHWEST/NORTHEAST ELEVATION
1/8"=1'-0"



FLOOR PLAN
1/8"=1'-0"



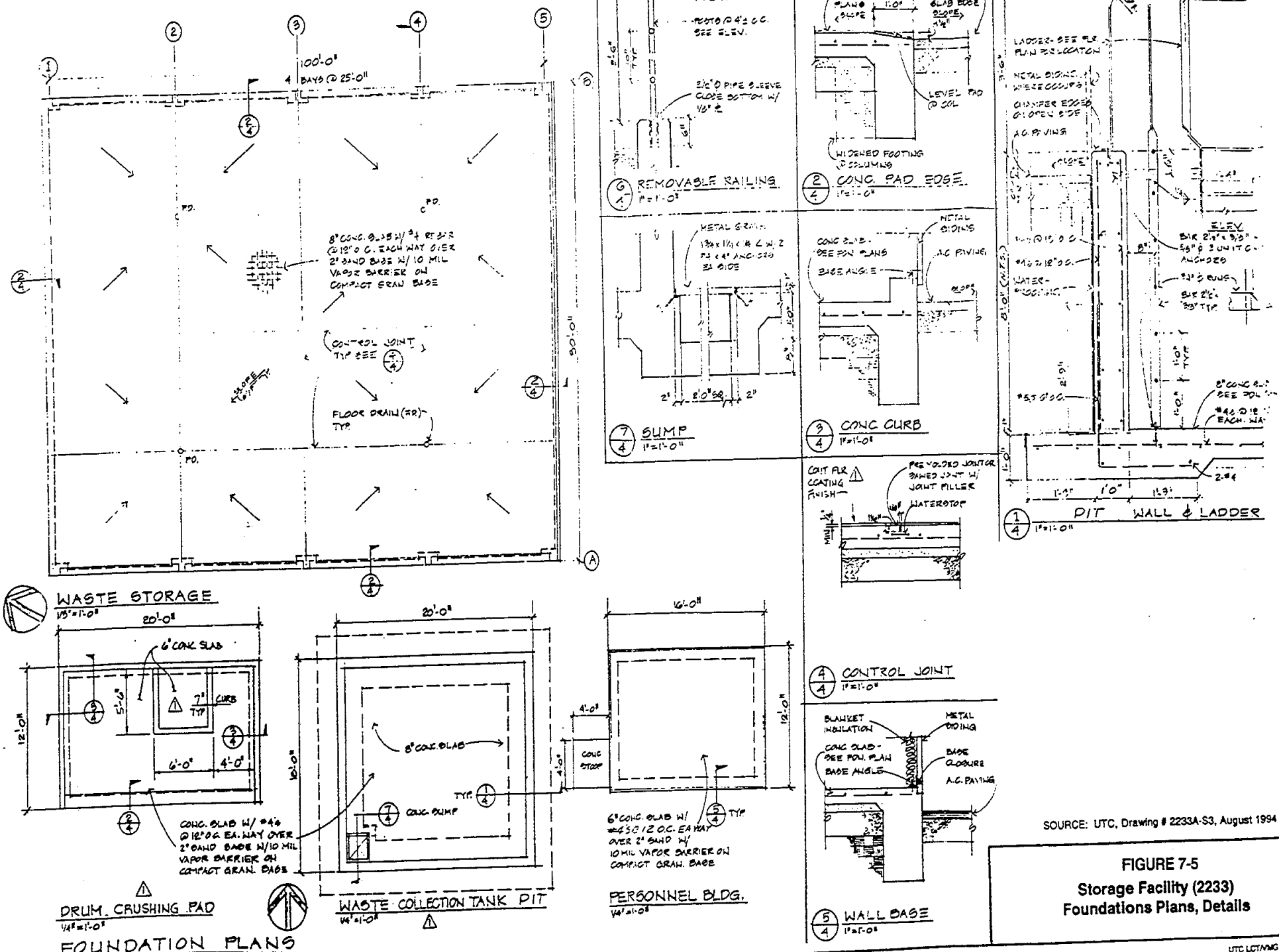


A/2 BUILDING SECTION
1/4"=1'-0"

WASTE STORAGE

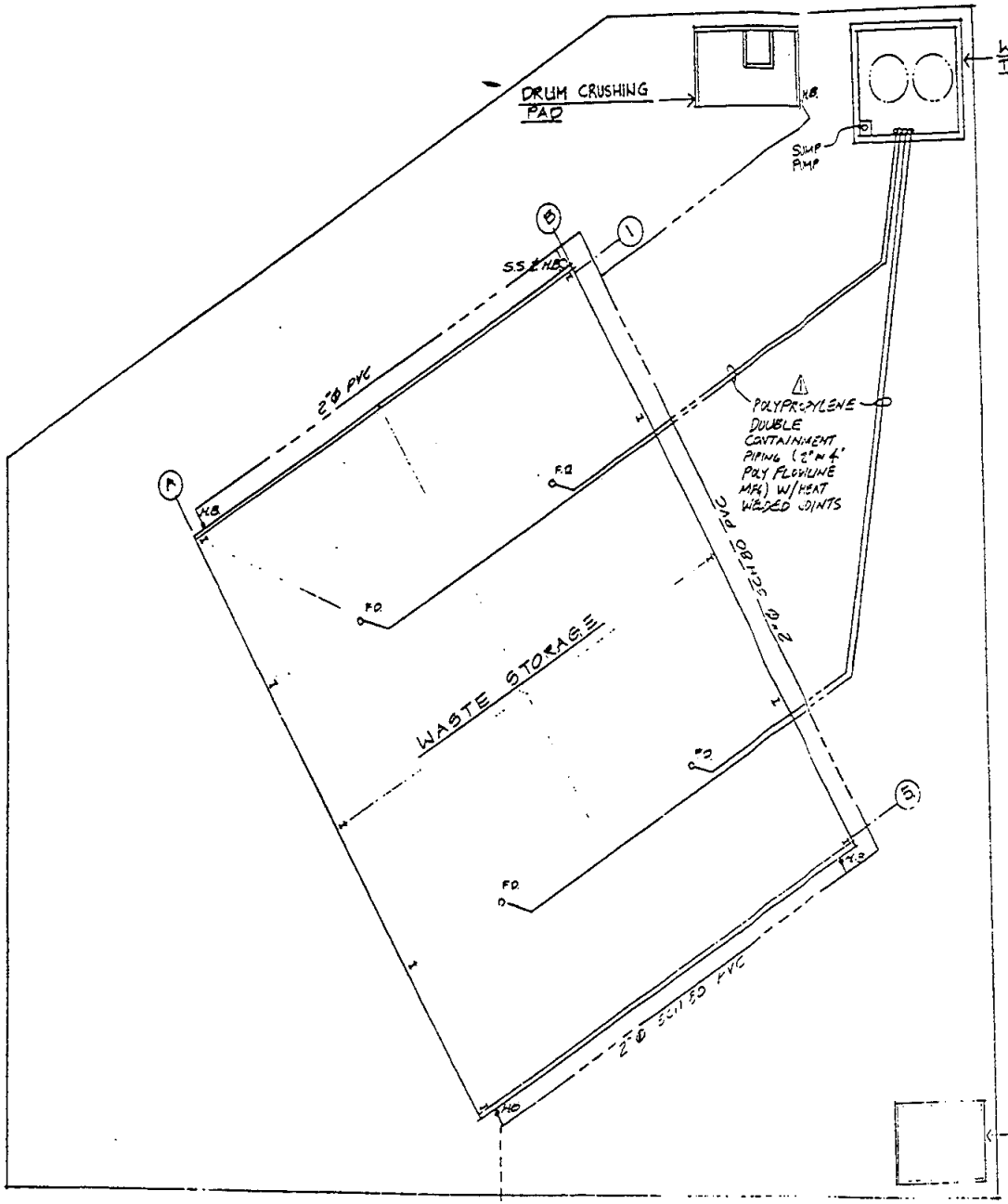
SOURCE: UTC, Drawing # 2233A-S1-1, August 1994

FIGURE 7-4
Storage Facility (2233)
Floor Plans, Elevations, Sections



SOURCE: UTC, Drawing # 2233A-S3, August 1994

FIGURE 7-5
Storage Facility (2233)
Foundations Plans, Details



PLUMBING NOTES

1. WORK TO BE IN ACCORDANCE WITH APPLICABLE CODES & WITH CSU STANDARD MECHANICAL SPECIFICATIONS.
2. INSTALL APP 30 L.F. OF 6"Ø BLUE BRUTE OR DUCTILE IRON PIPE ACROSS MANUFACTURING RD. PATCH PVMT AS REQ'D. REDUCE WATER LINE TO 6"Ø SCH 80 PVC AFTER P.I.V.
3. TIE-INTO EXIST. WATER MAIN W/ HOT TAP OR W/ WATER OFF AS SCHEDULED BY ENGINEER & FIRE DEPT.
4. EMBED WATER & DRAIN LINES IN SAND.
5. WASTE DRAIN SYSTEM SHALL HAVE CORROSION RESISTANT MATERIALS THROUGHOUT. MATERIALS MUST BE APPROVED BY OWNER'S REPRESENTATIVE.
6. WASTE STORAGE TANKS PROVIDED BY OWNER. INSTALLATION OF TANKS BY CONTRACTOR. TANKS SHALL BE 1000 GAL & STAINLESS STEEL.
7. SUMP PUMP SHALL BE PLUMBED & VALVED TO DISCHARGE TO EITHER TANK OR TO THE EQUAL.
8. THE MECHANICAL EQUIPMENT (DRUM CRUSHER & TOPPING UNIT) FOR THE DRUM CRUSHING HAS WILL TO SUPPLIED & INSTALLED BY OWNER.

PLUMBING LEGEND

WATER SUPPLY:

P.I.V. - POST INDICATOR VALVE

HYD. - FIRE HYDRANT (CLOW-LUDLOW 945, OR EQUAL)

SS. - SAFETY SHOWER

H.B. - HOSE BIB

G.V. - GATE VALVE W/VALVE BOX

WASTE DRAIN SYSTEM:

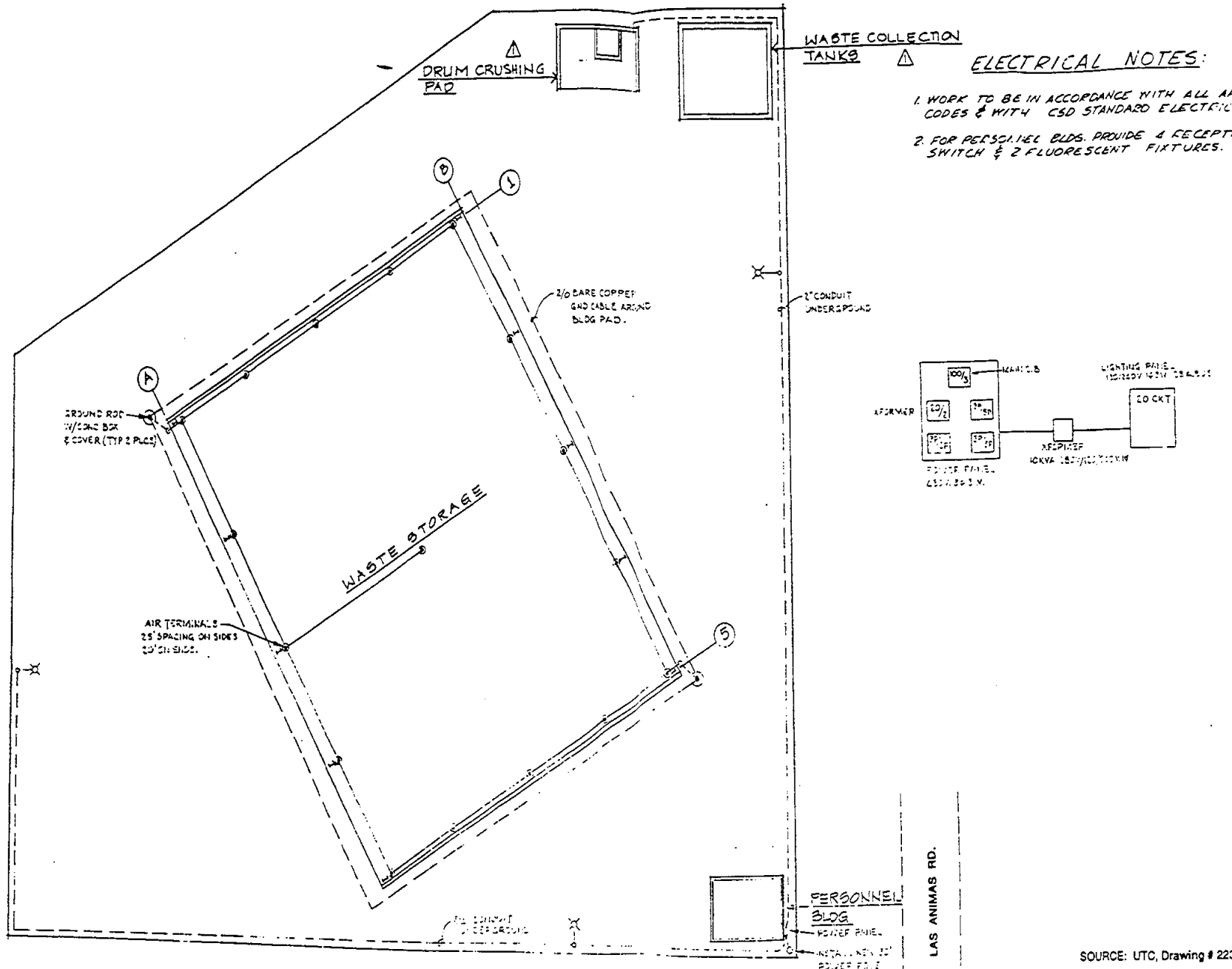
F.D. - FLOOR DRAIN

PLUMBING SITE PLAN
1"=10'-0"

SOURCE: UTC, Drawing # 2233A-M1-1, August 1994

FIGURE 7-6
Storage Facility (2233)
Plumbing

UTC LCT/VMG 4/11/95 SAC



ELECTRICAL SITE PLAN

1"=10'-0"

SOURCE: UTC, Drawing # 2233A-E1-1, August 1994

FIGURE 7-7
Storage Facility (2233)
Electrical

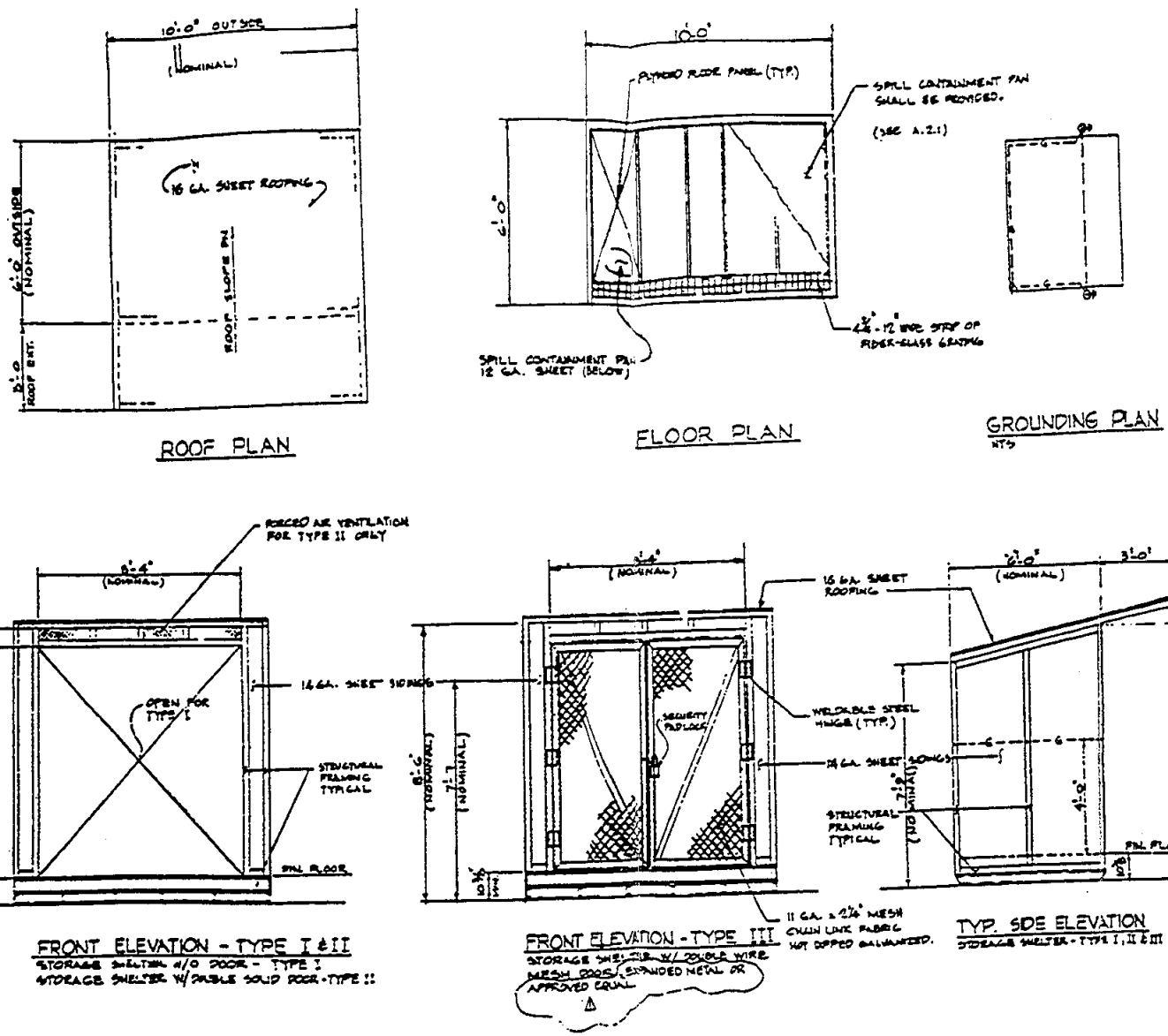
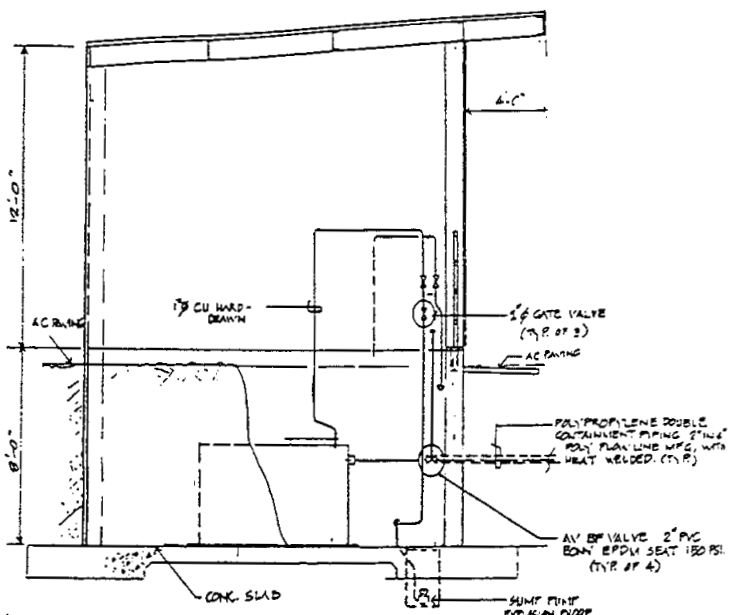


FIGURE 7-8
Chemical Storage Shelter Plans and Elevation, Type I, II and III

REF.: UTC/ CSD, DRAWING No. ME-4252-A1, TOLENTINO, 7-9-86

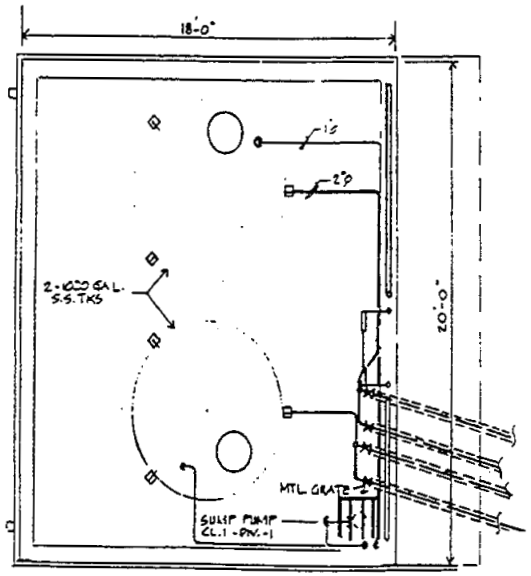
SOURCE: UTC, August 1994

UTC - VMG 8/15/94 SAC

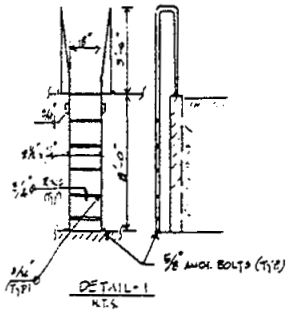


ELEVATION
SCALE-3/8"=1'-0"

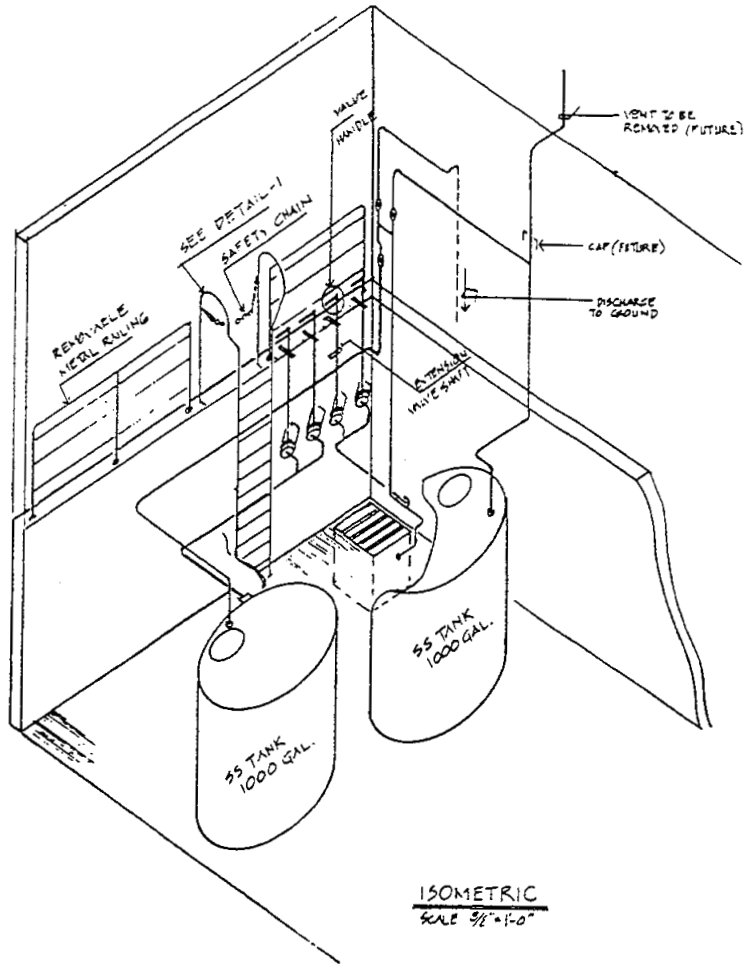
BLDG. SECTION



PLAN
SCALE 3/8"=1'-0"



DETAIL-1
N.T.S.



ISOMETRIC
SCALE 3/4"=1'-0"

SOURCE: UTC, Drawing # ME-4754-S-0, August 1994

FIGURE 7-9
Storage Facility (2233)
Tank Secondary Containment Plan

TABLE 7-2
TYPICAL CONTAINER SIZES

Size and Type of Container	Storage Area
55-gallon drums	A,B,C,D,F,G,H,I,J,K,L,M,N,O,Q,R,S,T
85-gallon salvage drums	A,B,C,D,F,G,H,I,J,K,L,M,N,O,Q,R,S,T
15, 20, 40, 50-cubic yard roll-off bins	P
1, 5, 15-gallon containers	A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,Q,R,S,T
55-gallon fiber drums	A,B,C,D,F,G,H,I,J,K,L,M,N,O,Q,R,S,T
30-gallon fiber drums	A,B,C,D,F,G,H,I,J,K,L,M,N,O,Q,R,S,T
1-cubic yard boxes	A,B,C,D,S,T
1-meter boxes	A,B,C,D,S,T

All transport of containers from generation and accumulation units to the Storage Facility (2333) is coordinated through RCRA Facility personnel. Typically, palletized containers are loaded onto a flatbed truck at the generation location and transported to the Storage Facility (2233) storage pad. Containers are off-loaded at the facility by forklift and staged in the appropriate quadrant based on compatibility. Containers may be handled on the pad with a hand-held hydraulic forklift. RCRA Facility personnel from the Storage Facility (2233) supervise loading and off-loading of hazardous waste containers.

All containers in which wastes are stored are labeled appropriately during storage and for shipment for final disposal. An example of the label that may be used to identify the contents of each container is shown in Figure 7-10. Containers are stored in rows no more than two wide, with labels exposed to the aisles, and with appropriate aisle space to move equipment. The labels typically contain the following information for waste stored prior to shipment, as applicable:

- Name and address of UTC facility,
- Accumulation start date,
- Physical state of the waste,
- Primary hazard of the waste,
- Description of container contents,
- Container number,
- Net weight or volume of container, and
- Internal tracking number.

Information on generating station designation, work order request designation, station contact name, badge number and phone number, and date received at the Storage Facility (2233), as applicable, are stored in the facility's waste tracking database.

Figure 7-10
Example Hazardous Waste Label

Prior to offsite shipment, the proper DOT shipping name and appropriate state and federal waste code numbers are placed on the container label. Absorbent clay and vermiculite are typically used for overpacking material.

7.1.2 Containment Design

To permit separation of incompatible wastes, the slab is divided into four quadrants consisting of separate containment systems. Each containment area is designed to slope toward 1 of 4 floor drains. Each drain includes a valve, which is normally closed, for spill containment. Spillage can be diluted or neutralized, as required, before being drained into one of two 1,000-gallon stainless steel containment tanks located in a concrete vault. The entire Storage Facility (2233) is located more than 50 feet from the UTC property line, which provides an adequate buffer zone for ignitable and reactive wastes.

Effluent collected in the containment tanks, either from spillage, precipitation, or pad wash down, may be sampled and analyzed based on generator knowledge of the waste for volatile and semivolatile organic compounds and heavy metals. If the effluent is determined to be hazardous based on the analysis, it is shipped offsite in bulk to a permitted disposal facility. If sampling is not conducted, the collected effluent is disposed of as hazardous. If the effluent is non-hazardous, it is disposed of as non-hazardous storm water.

The Storage Facility (2233) waste concrete slab was designed to meet DTSC secondary containment requirements that specify a 10 percent containment of the total volume of hazardous wastes stored at one time or the volume of the largest container, whichever is greater. The facility is designed to store up to three hundred twenty 55-gallon containers within the main storage pad (17,600 gallons) and eight 55-gallon containers within each of the ten storage sheds (440 gallons/shed). The total storage capacity of liquid waste is four hundred 55-gallon containers (22,000 gallons). Thus, the minimum required containment capacity is at least 2,200 gallons. Each containment area within the main storage pad can hold 3,100 gallons. Two 1,000-gallon stainless steel containment tanks provide an additional 2,000 gallons of secondary containment and secondary containment vault 15,234 gallons. Each storage shed is designed to provide secondary containment capacity of 205 gallons.

Appendix G provides a letter from a registered professional civil engineer certifying that the containment systems satisfy the containment control requirements for hazardous waste storage facilities. Appendix H provides details regarding the capacity of the main storage pad and sheds, and the secondary containment collection system for the Storage Facility (2233).

7.1.3 Run-on Control

Rainfall is directed away from the slab of Storage Facility (2233) by building downspouts and area grading. The area around the slab is asphalt paved and graded to direct stormwater away from the buildings. The run-off from the asphalt area surrounding the pad is carried away from the site through a system of catch basins and culverts, and discharged to the site drainage ditches. Although covered, the concrete waste pad occasionally collects precipitation that flows into the secondary containment holding tanks vault. The water in the containment tanks is sampled and analyzed for pH, volatile organic compounds, and metals prior to disposal. If sample analyses

indicate no contaminants above detection limits, the water is released to the storm drains. If the water is contaminated, it is managed, depending upon analytical results, as industrial wastewater or as hazardous waste.

7.1.4 Safety and Security Features

The Storage Facility (2233) is enclosed with a six-foot high chain link fence topped with barbed wired. Emergency egress gates are also located within the facility fencing and are available to personnel within the facility for quick evacuation when the main facility gates are locked. The locations of these gates are shown on Figure 7-1.

Signs indicating "NO SMOKING," "WARNING - EYE PROTECTION REQUIRED IN THIS AREA," and "TRESPASSING OR LOITERING FORBIDDEN BY LAW" are posted in appropriate locations. Also, large signs worded in English and Spanish and legible from a distance of 25 feet are posted at the entrances of the facility showing the following:

CAUTION - HAZARDOUS WASTE STORAGE AREA
UNAUTHORIZED PERSONS KEEP OUT
and
CUIDADO - ZONA DE RESIDUOS PELIGROSOS
PROHIBIDA LA ENTRADA A PERSONAS NO AUTORIZADAS

High-pressure sodium vapor lamps provide nighttime security lighting. At least one emergency phone or walkie-talkie is located within the facility Fire extinguishers are readily available and located strategically throughout the facility. Eyewash and safety showers are also located in close proximity to the work areas. Emergency response equipment is available at the facility for handling site emergencies and spill response. The typical locations of emergency communication and spill response equipment are provided in Figure 7-1. The location of spill response equipment may change based on variant operations and is depicted on Figure 7-1 for informational purposes only.

All facility personnel who handle wastes are provided with the appropriate protective clothing and equipment. Section 8.2 provides more detailed descriptions of personnel protective and emergency response equipment.

7.2 Storage Magazine (0312)

The Storage Magazine (0312) is used for up to one year storage of explosive waste (ignitable and reactive wastes). The stored waste is primarily accumulated at this site prior to transport and disposal offsite. A complete list of hazardous wastes potentially stored at the facility is contained in the Part A Permit Summary (Appendix E).

The Storage Magazine (0312) is located in the eastern portion of the UTC facility and more than 50 feet from the UTC property line, which provides an adequate buffer zone for ignitable and reactive wastes. A locked fence secures the area around the Storage Magazine (0312). RCRA Facility personnel have routine access to the Storage Magazine (0312) for the purpose of

accepting wastes, inspections, maintaining information, and relocating wastes within the magazine. Other individuals that come into the Storage Magazine (0312) area are those people transporting the wastes to and/or from the Storage Magazine (0312). Access is also available to UTC security, ERT, Environmental, and Health and Safety personnel.

The Storage Magazine (0312) is located in a fenced area that includes several other storage magazines that were built to the same specifications. The site plan for the Storage Magazine (0312) is shown in Figure 7-11. The primary entrance/exit gate from the area is located along Las Animas Road. Two emergency exits are located along the perimeter fence.

The Storage Magazine (0312) consists of three separate units under an earthen mound. Figures 7-12 and 7-13 contain the floor plans for the Storage Magazine (0312). These separate units are approximately 24 feet long, 13 feet wide, and about 9 feet high, and are prefabricated steel and concrete units. The units have a pipe on the ceiling that provides ventilation and each unit has a single door. The earthen mound is designed to drain precipitation away from the units. The units are watertight and each was installed as a complete prefabricated unit in 1984. Ignitable and reactive wastes are stored on forklift-type pallets and not directly on the ground.

7.2.1 Container Description

Typically, explosive waste materials are transported to the Storage Magazine (0312) in fiber drums. These drums are lined with conductive plastic liners into which the waste is placed. These wastes may be subsequently repackaged into DOT-approved containers for storage and shipment. The waste delivered to the Storage Magazine (0312) is generated and packaged at the onsite generator location. The waste is identified as ignitable and/or reactive and sent to this storage magazine because it is built to withstand fire and explosions.

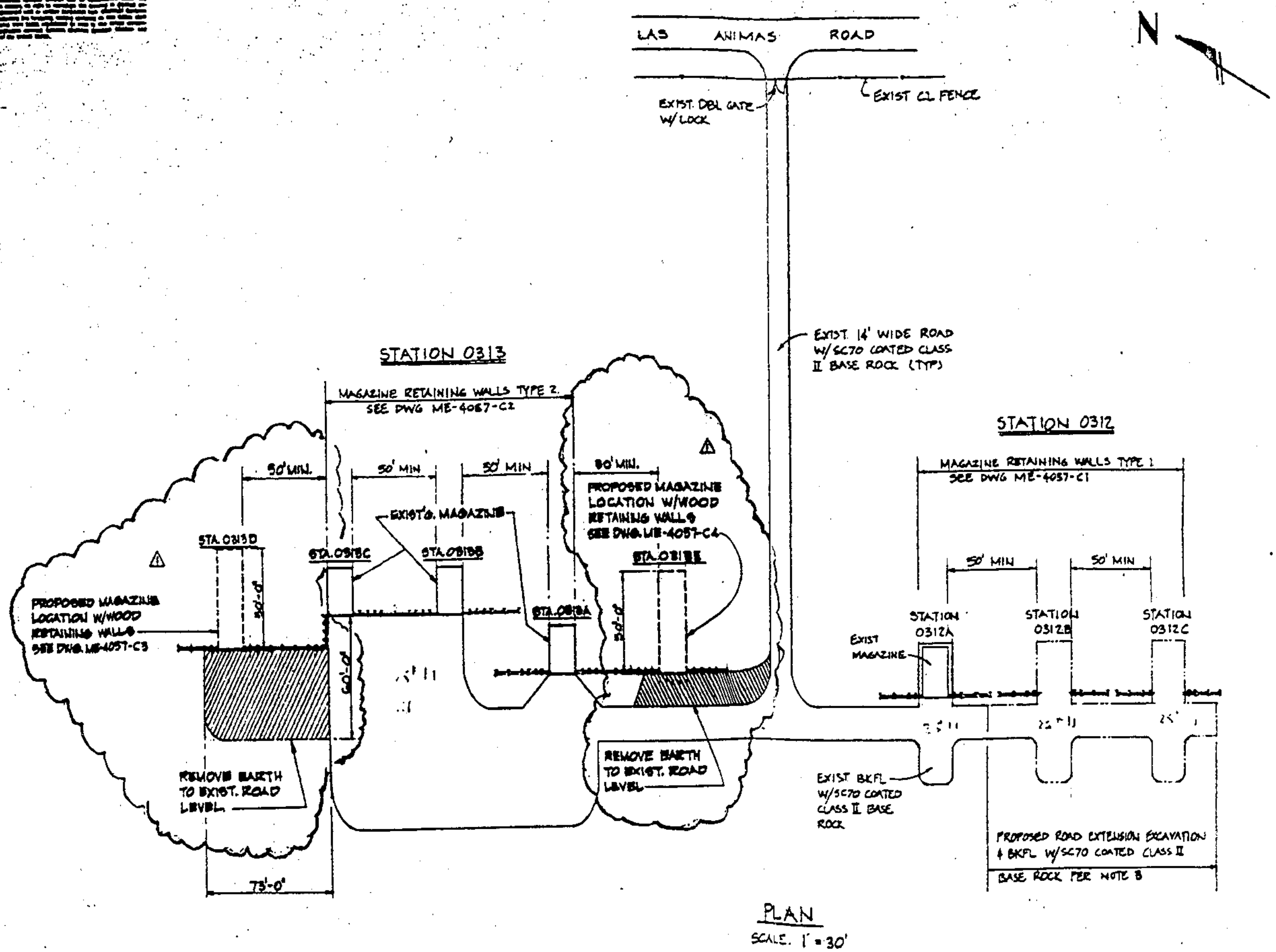
All transport of containers from generation locations is coordinated through RCRA Facility personnel. Typically, the waste is transported by truck to the entrance. The truck is met by RCRA Facility personnel at the entrance. The waste is then normally carried into one of the units. Containers may be handled with a cart if the weight exceeds the identified amount that can be carried by an individual. Loading and off-loading of ignitable and reactive waste containers are supervised by trained RCRA Facility personnel.

Prior to offsite shipment, the proper DOT shipping name and appropriate state and federal waste code numbers are placed on the container label. Absorbent clay and vermiculite are typically used for overpacking material.

7.2.2 Containment Design

The units housing the ignitable and/or reactive wastes are prefabricated units that can store up to a maximum of 30,000 pounds of DOT Class 1.3 wastes or 10,000 pounds of DOT Class 1.1 in each unit based on the explosive hazard. The design of the units has pipe openings on the ceiling to provide passive ventilation.

Most wastes placed in the Storage Magazine (0312) are in dry, solid form. Occasionally, “water-wet” (as opposed to free liquid) pretreated explosive waste, reactive liquid, or research waste is



Notes:

1. Each magazine shall be grounded to a copper welded ground rod ¾"Ø x 10' Hubbard #9450 or equal.
2. All backfill shall be compacted to 90% maximum density.
3. All roads and magazine pads shall have a minimum of 6: compacted class II base rock road base.
4. For magazine retaiing walls and foundation details see drawings ME-4057-C1 and ME-4057-C2.
5. All cut and fill slopes shall have a finished grade slope ratio of two horizontal to one vertical.
6. All construction and grading shall be approved by CSD facilities engineer.

Reference Drawings

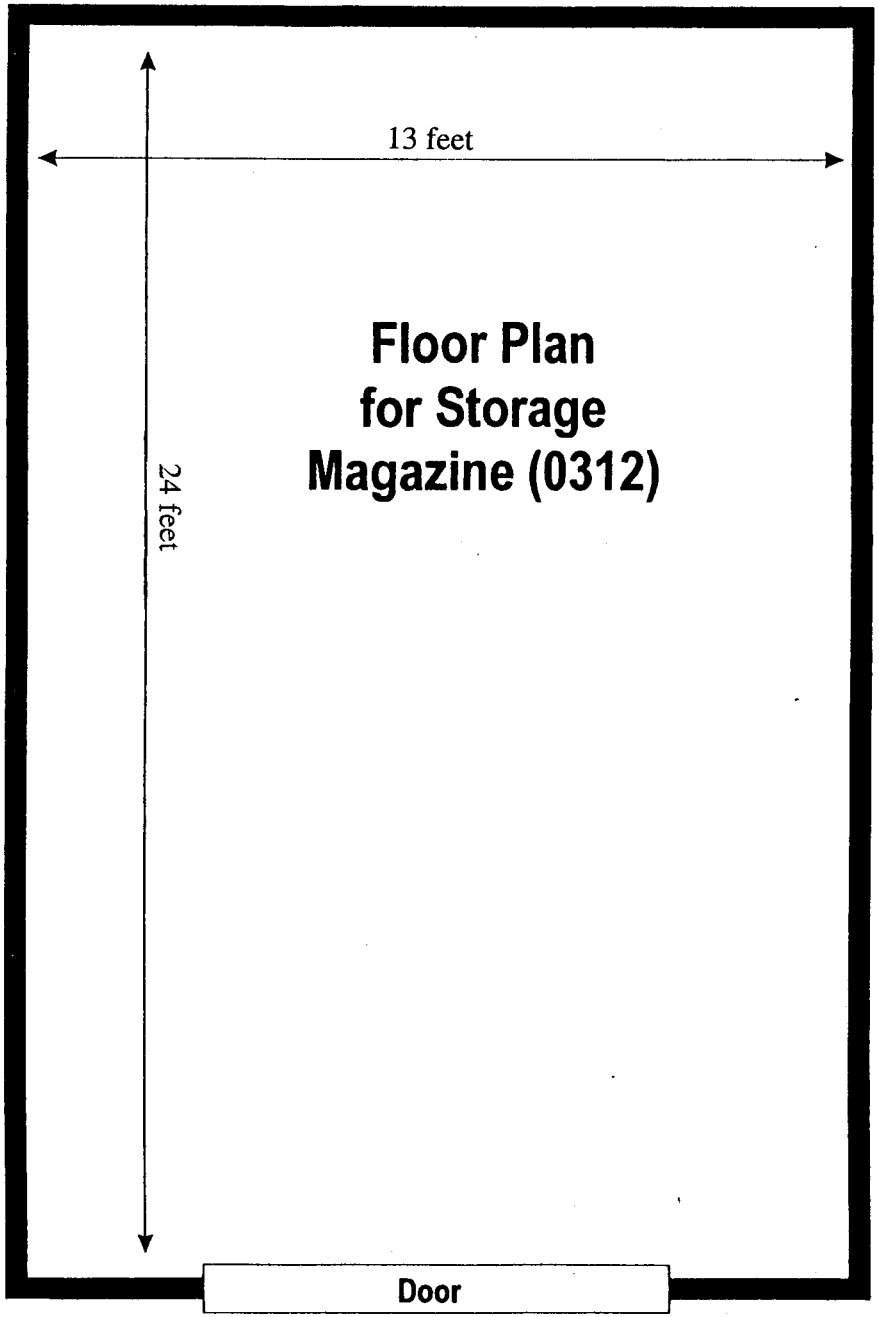
ME-4057-C1 — Magazine Retaining Wall
ME-4057-C2 — " " "
ME-4057-C3 — " " "
ME-4057-C4 — " " "

ADDED NEW PROPOSED MAGAZINE LOCATION W/WOOD RETAINING WALLS

DUYEMATSU 7-5-04

FIGURE 7-11

UNDERGROUND MAGAZINE STORAGE SITE PLAN STATIONS 0312 THRU 0313



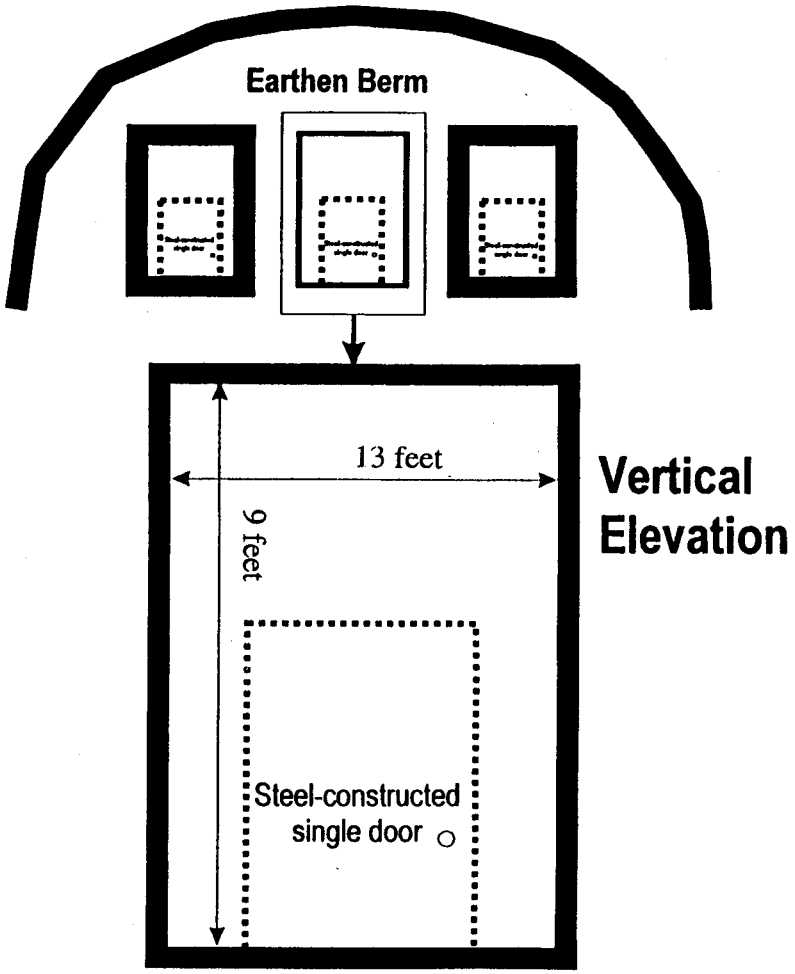
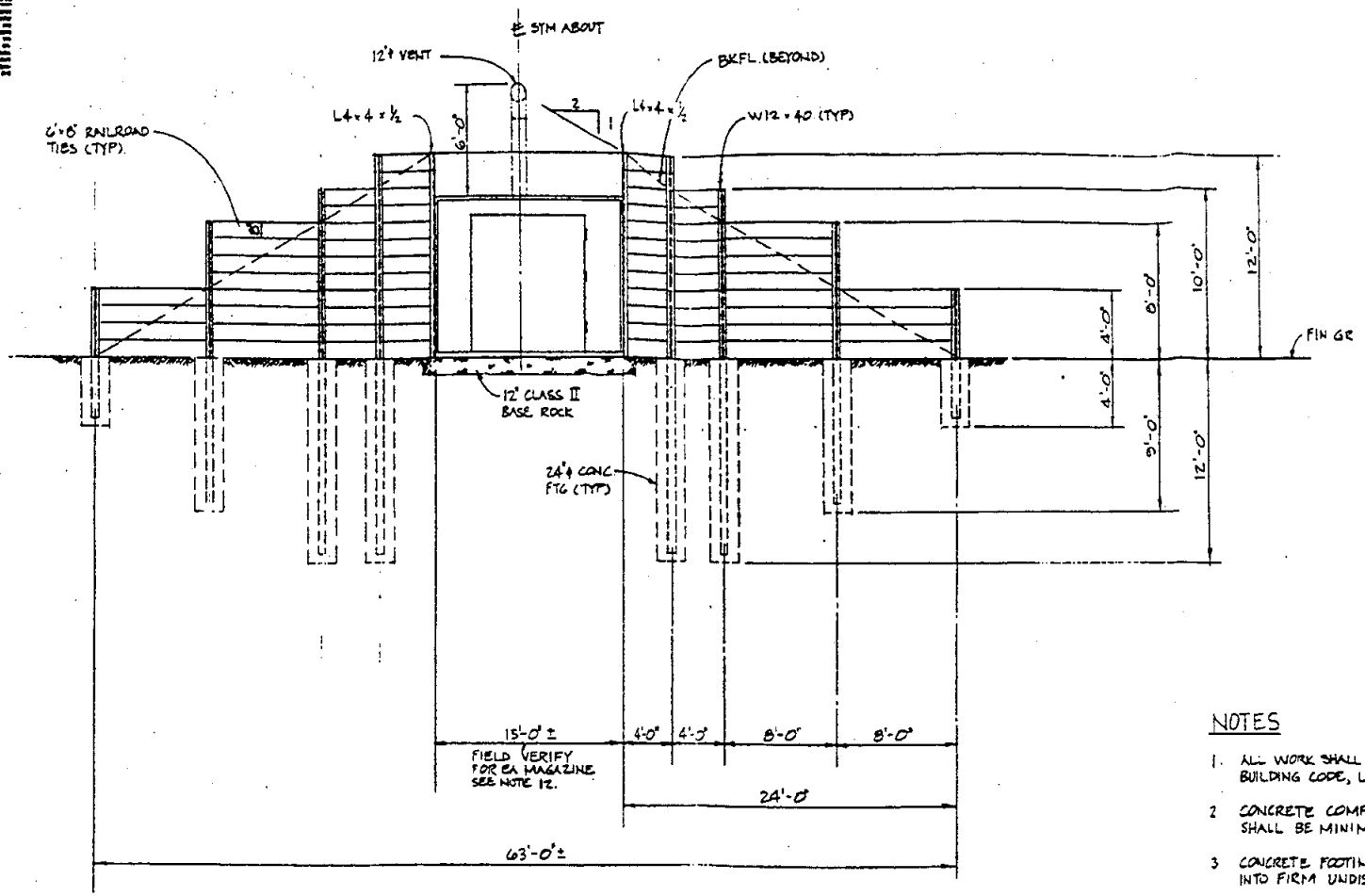


FIGURE 7-12
CSD STORAGE MAGAZINE (0312) FLOOR PLAN



MAGAZINE RETAINING WALL TYPE 1

SCALE: ¼" = 1'-0"

(MAGAZINE ℄ ROAD LEVEL)

NOTES

1. ALL WORK SHALL COMPLY WITH 1982 UNIFORM BUILDING CODE, LOCAL AND COUNTY CODES.
2. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE MINIMUM 3,000 PSI.
3. CONCRETE FOOTINGS SHALL BE PLACED INTO FIRM UNDISTURBED EARTH.
4. ALL BACKFILL SHALL BE COMPACTED TO 90% MAXIMUM DENSITY.
5. ALL STEEL EXPOSED TO EARTH SHALL BE PAINTED WITH BITUMINOUS COATING.
6. ALL STEEL SHAPES AND SIZES SHALL BE A.S.T.M. A36
7. RAILROAD TIES SHALL BE 6"x8"x8' AND PRESSURE TREATED W/ 50% CREOSOTE AND 50% PETROLEUM.
8. MAGAZINE SHALL BE WATERPROOFED WITH BITUMINOUS COATING BEFORE BACKFILLING.
9. ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" CHAMFER.
10. REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A-615 AND GRADED
    GRADE 40 - #5 AND SMALLER
    GRADE 60 - #6 AND LARGER
    PLACED AS SHOWN AND LAPPED 24 BAR DIAMETERS AT ALL CORNERS UNLESS NOTED OTHERWISE.
11. CONCRETE FOOTINGS SPACED 4'-0" APART SHALL BE EXCAVATED AND POURED AT ALTERNATE SPACINGS OF 8'-0".
12. DIMENSIONS BETWEEN MAGAZINES MAY VARY SLIGHTLY. CONTRACTOR SHALL VERIFY DIMENSIONS FOR EACH MAGAZINE BEFORE BEGINNING CONSTRUCTION.

SHEET 1 OF 2

ME-4057-C1

DUYEHATSU 6-15-84

FIGURE 7-13

MAGAZINE RETAINING WALL
MAGAZINE STORAGE FACILITY
STATION 0312 THRU 0313

placed in the facility contained in Poly 1H containers that are Velostat black trays with lids. The small trays are 12" x 12" x 4" and the larger trays are 3' x 2' x 1'. Trays of wet waste are placed in polyethylene pallets that are 4' x 4' x 18" to provide secondary containment (66 gallons/pallet). Containers may be double-stacked as long as there is sufficient secondary containment (10 percent of the total container volume or the volume of the largest container, whichever is greater).

The design of the each unit allows for the storage of up to (1) six pallets of four 55-gallon drums of liquid waste, (2) six pallets of four 250-pound fiber drums containing dry solid wastes, (3) six pallets with a 1 cubic yard box containing bulk solid waste, (4) two large packages (such as 3-foot by 8-foot packages of 3,000 pounds each) containing bulk solid waste, or (5) combinations of different pallets and packages, and still allow for proper handling, inspection, and secondary containment of liquid wastes (see Figure 7-14). No incompatible wastes will be stored in the same unit at the Storage Magazine (0312).

7.2.3 Run-on Control

The Storage Magazine (0312) consists of mounded earth over a metal structure. The magazine meets DOD requirements for storage of explosive wastes. Run-on from rainfall does not contact the building. The ground surrounding the magazine is graded to provide run-off drainage.

7.2.4 Safety and Security Features

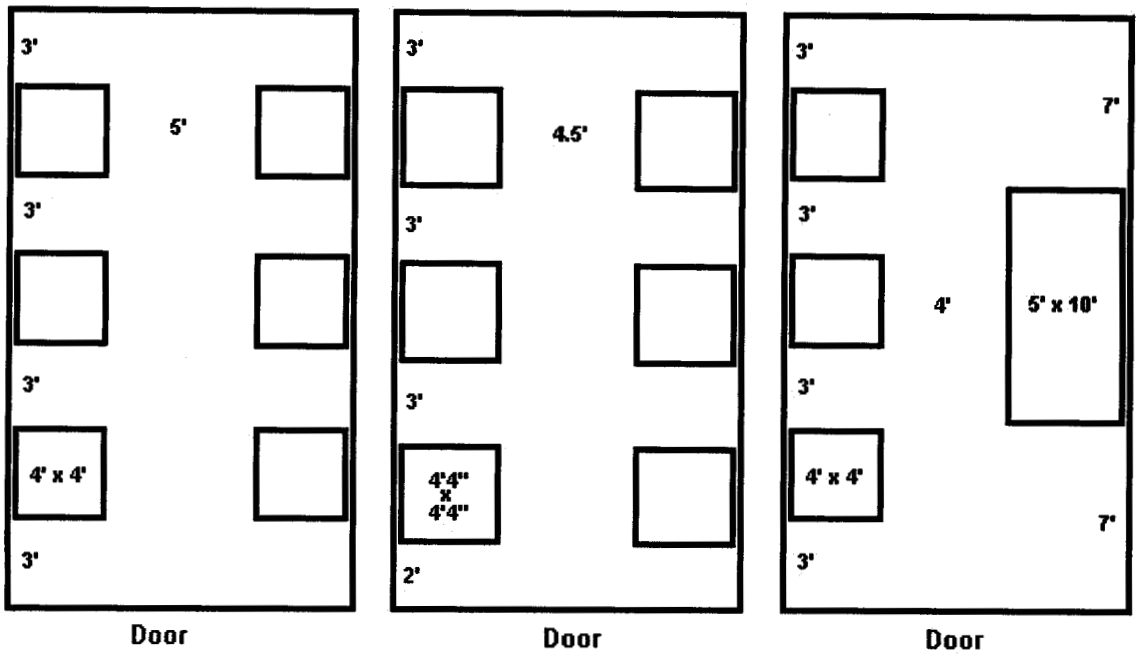
The Storage Magazine (0312) is enclosed with a six-foot high chain link fence topped with barbed wire. Emergency egress gates are also located within the facility fencing and are available to personnel within the facility for quick evacuation when the main facility gates are locked. DOT orange signs for "Class I Explosives" are also posted where DOT Class I explosives are present.

Signs indicating "TRESPASSING OR LOITERING FORBIDDEN BY LAW" are posted in appropriate locations. Also, a large sign worded in English and Spanish and legible from a distance of 25 feet is posted at the entrance of the facility showing the following:

DANGER - HAZARDOUS WASTE STORAGE AREA
UNAUTHORIZED PERSONS KEEP OUT
and
PELIGRO - AREA DE ALMACENAMIENTO DE DESPERDICIOS
PELIGROSOS – PERSONAL NO AUTORIZADO MANTENGASE AFUERA

RCRA facility personnel are equipped with walkie-talkies. A fire extinguisher and a portable eyewash and safety shower are located at the Storage Magazine (0312). Emergency response equipment is available at the Storage Facility (2233). All RCRA facility personnel who handle waste are provided with the appropriate protective clothing and equipment. Section 8.2 provides more detailed descriptions of personnel protective and emergency response equipment.

FIGURE 7-14
STORAGE MAGAZINE (0312)
Floor Plan Showing Examples of Maximum Waste Storage Per Unit



6 pallets x 4 drums x 55 gallons = 1,320 gallons

6 pallets x 4 drums x 250 pounds = 6,000 pounds

3 pallets x 1 cubic yard box x 1,800 pounds + 1 large package 3ft x 8 ft x 3,000 pounds = 8,400 pounds

8 FACILITY EQUIPMENT

This section pertains to regulations 22 CCR §66270.14(b)(8), §66264.14(a) and (b)(1), §66270.14(b)(4).

8.1 Waste Handling Equipment

Waste handling equipment is operated by Storage Facility (2233) personnel as part of their normal waste management activities. Typically, most wastes are contained in drums, which are delivered to the Storage Facility (2233) using flatbed and stakebed trucks. Loading and unloading is normally accomplished with forklifts. The forklift used at the Storage Facility (2233) is equipped with a drum carrier that allows transporting, raising, tilting, and draining of drums. Drums are also handled on the storage pad with a hand held hydraulic forklift. Vacuum tanker trucks are used to empty drums prior to transportation offsite.

Due to the small container size quantities of ignitable and reactive waste handled at the Storage Magazine (0312), there are limited amounts of waste handling equipment at that location. Wastes that are generated from the different process facilities are contained in small packages, generally 5-gallon fiber drum containers. The containers are loaded onto either flatbed trucks or trailers for transport. The containers are off-loaded and handled within the Storage Magazine (0312) by hand. If needed, a handcart can be used.

8.2 Safety and Emergency Equipment

8.2.1 General

A listing of equipment and materials generally available to departments normally involved in chemical safety and emergency response activities is contained in the Integrated Incident Response and Contingency Plan (Appendix I).

The onsite ERT staffs a Hazardous Materials Response Trailer. The trailer is available for both onsite and offsite emergency response operations. Protective clothing including suits, gloves, boots, spill equipment, self-contained breathing apparatus (SCBA), and other items are typical examples of emergency response equipment maintained in the trailer. A complete listing of equipment found in the response trailer is included in the Integrated Incident Response and Contingency Plan (Appendix I).

MSDSs for chemicals used onsite by UTC personnel are maintained on file in the UTC Safety Department. Both hard copy and files on electronic media are available. MSDSs for chemicals used onsite by RCRA Facility personnel are maintained onsite by the RCRA Facility personnel.

8.2.2 Emergency and Personal Protective Equipment

The emergency equipment and materials available to personnel working at the Storage Facility (2233) and the Storage Magazine (0312) are presented in Tables 8-1 and 8-2. Figures 8-1 and 8-2 show specific equipment locations within at the Storage Facility (2233) and the Storage Magazine (0312), respectively, for the various safety and emergency response equipment. Additional equipment is located at the Storage Facility (2233) and at Station 0024 where the ERT is quartered.

8.3 Security

8.3.1 General

An eight-foot chain link fence topped by three-strand barbed wire encloses the entire UTC facility, with the exception of the western portion. The western boundary is two miles from public access and is protected by four-strand barbed wire cattle fencing. The perimeter fencing is conspicuously posted with signs prohibiting trespass. The fence is provided with gates at strategic locations to allow emergency vehicle access. These gates may be kept locked depending on their use and are monitored for signs of tampering should they be normally locked. Guard posts are present at the north end of Shingle Road and the east end of Manufacturing Road (Figure 3-1).

Security is controlled by trained staff in the Security Control Room located adjacent to the UTC facility's main entrance at the north end of Shingle Road. This room serves as a 24-hour emergency and security communication center. Telephone and radio communications are controlled from this room. Fire, smoke, personnel assistance, and leak detection alarms are monitored from the Control Room. There is also a closed circuit television monitor at the Control Room that is connected to surveillance cameras throughout the facility. The Security Control Room also monitors access to all gates.

Security lighting is provided around the perimeter of buildings and along roadways. Uniformed security officers in radio-dispatched vehicles make continuous rounds of the facility during non-work hours. These officers are trained and equipped to respond to physical security emergencies.

The Storage Facility (2233) and the Storage Magazine (0312) are located on Las Animas Road, a private road. All hazardous waste generation areas are located within the facility boundaries, and are, therefore, subject to facility-wide security measures. All visitors in personal vehicles are processed through the main gate at the Security Control Room located on Metcalf Road. Badges are required for all persons entering the facility. All visitors, including contractors and non-employee visitors, are required to register at the security office and are provided with distinctive identification badges. Badges must be worn at all times while onsite. Any person not properly badged will be denied entry.

TABLE 8-1
EMERGENCY AND PERSONAL PROTECTIVE EQUIPMENT
AVAILABLE AT THE STORAGE FACILITY (2233)

Personal Protective Equipment*
Tyvek, acid resistant, and Saranex suits
Respirators (full and half face) with assorted cartridges
Dust masks
Safety glasses
Goggles and shields
Gloves: latex, neoprene, nitrile, and PVAc supported
Emergency Equipment*
Fire extinguishers: ABC type
Safety shower and eye wash (2)
Telephone (2)
Acid and base neutralizer absorbent
Absorbent cloth and clay
"Plug and Dike"
Drain plug rug, spill dike
Drum inverter and drum grabber
Shovels and brooms
Salvage drums and containment tanks
Drum pump, dolly and wrench
Fork lift and pallet jack
Secondarily contained, portable storage units

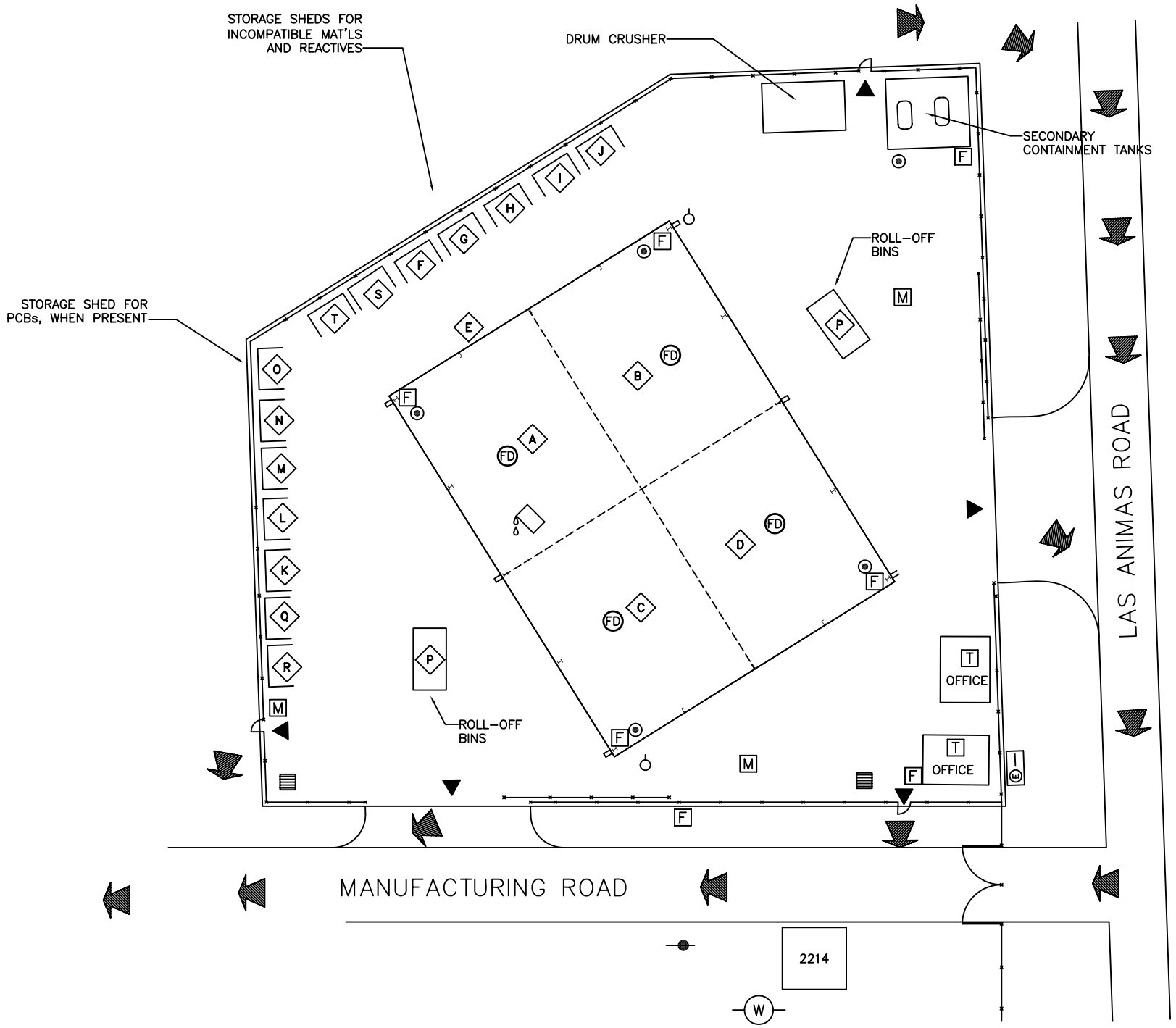
*Typical equipment; actual inventory may vary. RCRA Facility personnel will also wear fire retardant overalls and lab coats, leather gloves, and steel toe boots, as appropriate.

TABLE 8-2
EMERGENCY AND PERSONAL PROTECTIVE EQUIPMENT
AVAILABLE AT THE STORAGE MAGAZINE (0312)

Emergency Equipment*
Fire extinguishers: ABC type
Portable safety shower and eyewash
Secondarily contained, portable storage units

*Typical equipment; actual inventory may vary. RCRA Facility personnel will also wear fire retardant overalls and lab coats, leather gloves, and steel toe boots, as appropriate, and will be equipped with radio communication equipment.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



LEGEND

- FIRE PROTECTION SPRINKLER RISER
- FIRE SPRINKLER
- FIRE EXTINGUISHER
- EVACUATION ALARM MUSHROOM BUTTON
- EVAC ALARM RESET
- EYEWASH / SHOWER
- SPILL KIT
- EVAC ASSEMBLY AREA
- EVACUATION ROUTE
- EXITS
- MONITORING WELL
- STORM / SEWER DRAIN
- TELEPHONE
- FLOOR DRAIN
- HAZMAT STORAGE
  NOTE: LETTER DESIGNATION IS REFERENCE TO ENVIROMENTAL INVENTORY LIST
- FENCE

0' 5' 10' 20'

QUALITY: DATE	DRAWN BY: FBCapp DATE 2/1/96	UNITED TECHNOLOGIES CHEMICAL SYSTEMS	SAN JOSE, CALIFORNIA 95138
OPERATIONS: DATE	CHECKED BY: G. Nicoll DATE 11/28/06	FACILITIES DEPARTMENT	
PROGRAM: DATE	DES/FAC ENGR: DATE	FIGURE 8-1 STORAGE FACILITY (2233) EMERGENCY EQUIPMENT	
ESD: DATE	SAFETY: DATE		
APPROVED: DATE	CLIENT ORG: DATE		
APPROVED: DATE	RELEASE APPROVAL DATE		

SIZE	CAGE CODE	DRAWING / PART NO.	REV.
D	14134	2233L101	C

SCALE 1/16"=1' CAD FILE: Part A B 2233 Map.dwg SHEET 1 OF 1

DWG NO. 2233L101 SHT 1

DWG NO. 2233L101 SHT 1

File: L101A01 Date/Time: June 13, 1996 9:53 a.m. Scale: 1=192 Steve Holl, UTC Inc. Xrefs:

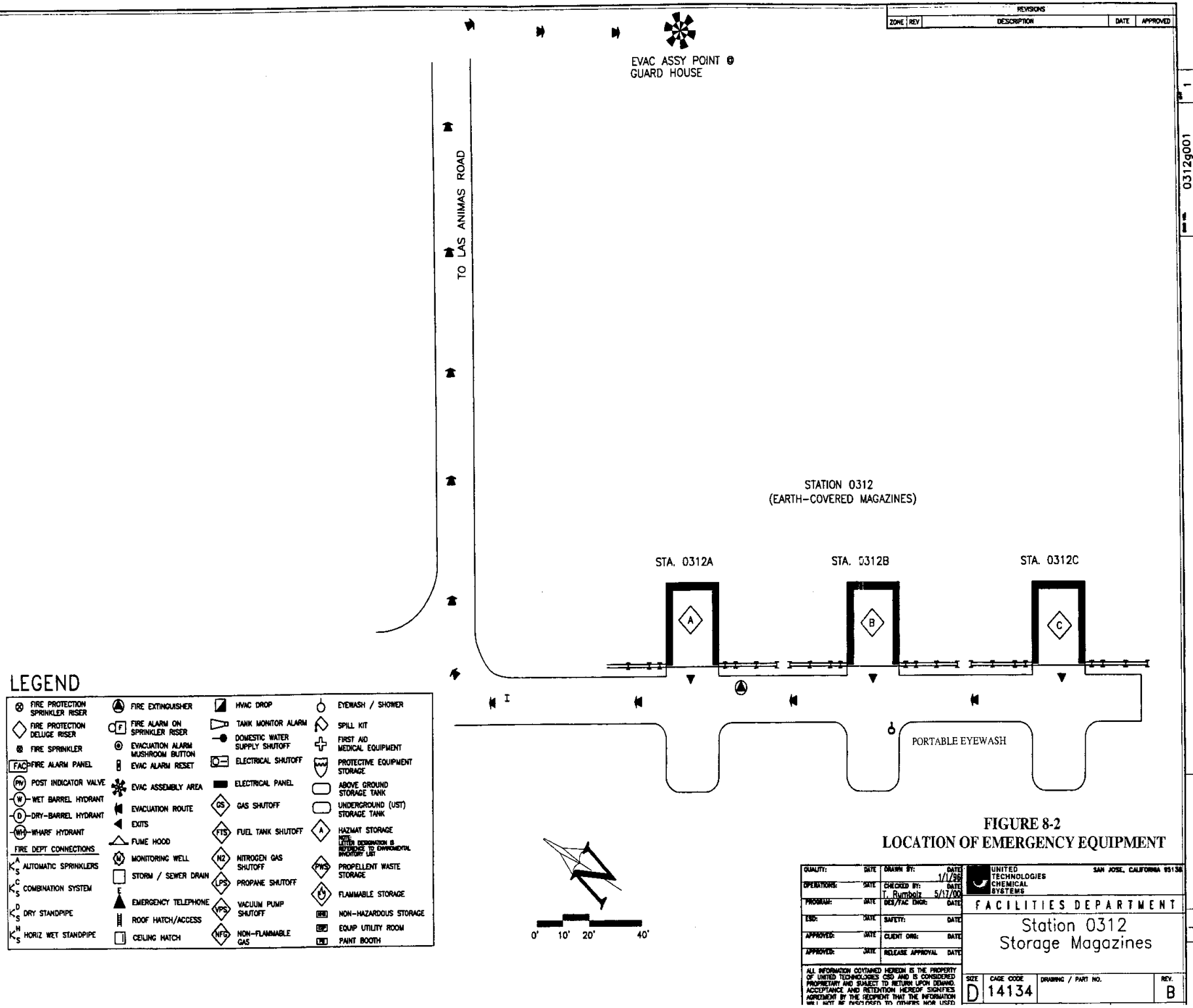


FIGURE 8-2
LOCATION OF EMERGENCY EQUIPMENT

The majority of truck deliveries come in through the front gate. All hazardous material and waste shipments are processed through the back gate, located on Las Animas Road. There is one guard station on Las Animas Road. The guard stations at the property boundaries are staffed when the roads into UTC are open to traffic.

Warning signs are located at intervals along the facility's perimeter fence. These signs are 12" x 18", and are worded as follows:

TRESPASSING OR LOITERING FORBIDDEN BY LAW
(SECTION 533 CPC)
UNITED TECHNOLOGIES CHEMICAL SYSTEMS

8.3.2 RCRA Facility Security

The Storage Facility (2233) and the Storage Magazine (0312) have a six-foot tall chain link fence topped with barbed wire between each facility and Las Animas Road. The Storage Facility (2233) and the Storage Magazine (0312) are kept locked when personnel are not present to prevent unauthorized access. Several warning signs are posted on the fence with "TRESPASSING OR LOITERING FORBIDDEN BY LAW." In addition, large signs that are legible from a distance of 25 feet are posted at or near the entrances to the two active RCRA facilities that read, "Danger – Hazardous Waste Storage Area" in English and Spanish.

The hours of operation for the two RCRA facilities are typically between 7 am and 7 pm, but may vary based on required operations or shipments. High-pressure sodium vapor lamps provide nighttime security lighting. Eyewashes, safety showers, and fire extinguishers are located within the facility (Figures 8-1 through 8-2 show the specific locations within the two RCRA facilities). Emergency phones are present at the Storage Facility (2233); walkie-talkies are used at both RCRA facilities.

All facility personnel handling wastes are provided with appropriate protective clothing and equipment. Section 8.2.2 and the Integrated Incident Response and Contingency Plan (Appendix I) provide detailed descriptions of personal protective and emergency response equipment.

8.4 Water Systems

8.4.1 Water Supply

Drinking water for the UTC facility is supplied from source wells located onsite. Two wells are located one half mile north of South Coyote on the east side of Highway 101 (Figure 2-1). Water from each well is pumped to a treatment plant before introduction into the site distribution system. The water distribution system includes storage capacity for over 485,000 gallons.

8.4.2 Domestic Water Protection

A listing of site backflow devices is provided in Appendix J. Most of the units are not related to hazardous waste activities, but are included for informational purposes. The devices listed in Appendix J may change throughout routine maintenance, repair, or replacement activities without prior agency notification. A current listing of backflow devices is available for inspection.

9 OPERATIONAL PROCEDURES

This section pertains to regulations 22 CCR §66270.14(B)(5) and (8), §66264.17, §66270.14(B)(9) and (19), §66264.15, and §66264.17(A) and (C).

9.1 Hazardous Waste Control

9.1.1 General

Hazardous waste generators are required to provide a complete and accurate characterization of wastes sent to offsite treatment or disposal facilities. UTC contracts with selected vendors for treatment or disposal of hazardous wastes and must provide these offsite facilities with waste characterization data. UTC disposal vendors use this information to evaluate and subsequently provide appropriate treatment, as required, or disposal of the wastes shipped from the UTC facility. Appendix K provides a flow diagram showing the movement of waste from generation locations to ultimate disposal.

9.1.2 Internal Manifest

UTC uses an internal hazardous waste manifest system for the management and transport of hazardous wastes within the UTC plant. The first step of the process is that the generator completes a Process Waste Profile Form for a hazardous waste stream that is generated and submits the form to RCRA Facilities personnel for approval. When the generator needs hazardous waste containers, they complete the Process Waste Container Delivery Form, submit it to the RCRA Facilities personnel, and a container is delivered to the station from the Storage Facility (2233). The container delivered to the station has an Internal Process Waste Manifest Container Pick-up Form (Internal Manifest) attached to the side. The internal manifest tracks when waste is first added to the container, each time additional waste is added, and when the container is full or has reached the accumulation limit.

RCRA Facilities personnel are responsible for delivering the appropriate waste packaging to the station that generates the waste. Each container that accumulates hazardous waste shall be marked with the Hazardous Waste label containing a generic description of the waste. The accumulation start date is added to the container label when the container is issued. This allows RCRA Facilities personnel to track containers to ensure that all required time limits are met. The Internal Manifest is marked with the accumulation start date when the first drop of hazardous waste enters the container, each date that additional waste enters the container, and a description of the waste added each time. Hazardous waste storage sheds designed for the storage of hazardous waste are located at selected stations and provide secondary containment. Regular inspections of the waste storage areas are performed by generator personnel. Internal policy dictates allowable holding times for hazardous wastes at the stations; wastes are stored for less than 60 days.

When a container of waste is full or has reached the accumulation time limit, the generator of the waste completes the Internal Process Waste Manifest Container Pick-up Form and sends a copy to the RCRA Facilities personnel. The Internal Process Waste Manifest Container Pick-up Form notes the control number, size, and type of container. It provides a description of the contents, the accumulation start date, dates when additional waste were added, the amount of waste, the date it is requested for pick-up/removal, and the signature of the generator or authorized agent.

Copies of the three forms discussed above: 1) Process Waste Profile Form; 2) Process Waste Container Delivery Form; and 3) Internal Process Waste Manifest Container Pick-up Form (Internal Manifest) are contained in Appendix L. Because these forms are internal control documents only, they may be modified or updated to reflect changes in operating procedures without prior agency approval.

9.1.3 Site Operational Procedures

9.1.3.1 Waste Generation

Onsite hazardous waste operations are performed under UTC's *Health and Safety Plan for United Technologies Corporation, Pratt & Whitney Rocketdyne, San Jose Hazardous Waste Operations* and BBL's *Health and Safety Plan (HASP) BBL/BBLES Programs*. Both plans are included Appendix T.

Most of the hazardous wastes handled onsite are in individual 55-gallon drums or other smaller containers. Wastes are collected in steel or fiber drums, carboys, bottles, and other appropriate containers. Packaging of chemical wastes in original DOT-approved containers, in which the chemical was originally delivered, is encouraged.

Typically, explosive waste materials are handled in fiber drums. These drums are lined with conductive plastic liners into which the waste is placed.

Hazardous wastes are typically accumulated at the point of generation for up to 60 days within hazardous waste storage sheds located throughout the UTC facility. These sheds are intended to safely hold waste containers prior to movement to one of the two RCRA facilities. The metal sheds have slant roofs and a grate floor. Containment areas under the grates are designed to contain a spill or leak of up to 200 gallons. There are no drains to ground from the sheds. All sheds are equipped with grounding straps for each drum to prevent static sparking.

9.1.3.2 Field Inspection for Non-Energetic Wastes

Internal process waste manifests are collected at a central point and assigned an internal tracking number. This number is written on the form. The container may thus be identified in both the generator records and in the RCRA Facilities records. This system eliminates the duplication of tracking numbers. An informal list is generated that lists all waste containers on the site ready for transfer to the Storage Facility (2233).

RCRA Facilities personnel use the drum operation report to inspect the containers. The purposes of this inspection are to ensure that the waste is properly identified and packaged and that the container is safe to transport to the Storage Facility (2233). The technician will check the condition of the container for any leaks, bulges, loose bungs or other evidence of damage. The type of container is evaluated for compatibility with the waste and the pallet is visually inspected for integrity and discoloration from spills. The container may be opened to visually verify the contents. If the waste is corrosive, it may be tested for pH using litmus indicator paper. The label will be checked for completeness and accuracy.

If any physical or paperwork deficiencies are found, such as incomplete chemical composition or improper packaging, the generating party is notified. Necessary corrective action is taken by the generator's personnel. The container will not be picked up until it has passed all aspects of this inspection process. When the container has passed inspection, it is marked with the complete internal tracking number and is ready for transfer to the Storage Facility (2233). Waste is transported onsite by RCRA Facilities personnel using a vehicle such as a flat bed truck or forklift.

A copy of the completed Internal Process Waste Manifest is maintained at UTC for record keeping and database tracking purposes.

9.1.3.3 Consolidation of Like Wastes and General Handling Procedures for Non-Energetic Wastes

Before shipment to a disposal facility, like wastes may be consolidated. Contaminated soils that fit a specific profile are consolidated into a roll-off bin. Trained personnel wearing the appropriate personal protective equipment carry out these consolidations. Care is taken to ensure the safe transfer of material from one container to another. This includes the use of proper equipment and procedures such as grounding flammable liquids before transfer. General categories of wastes and the typical handling procedures specific to each are outlined below.

- Solvents. Solvents are typically collected at each generating point in DOT-approved 5-gallon or 55-gallon containers. These are segregated into chlorinated versus non-chlorinated categories. Small containers of compatible solvent wastes may be consolidated.

- Poisons. Poisons handled at the Storage Facility (2233) are typically either isocyanates or chlorinated compounds. Handling of chlorinated solvents is described above. The isocyanates are typically shipped in their original shipping container if the container meets DOT standards for shipment of waste.

- Acids/Bases. Acids and bases are handled and stored in separate area at the Storage Facility (2233). Acids and bases are typically labpacked in compatible containers that contain less than five gallons. Labpacking may be conducted by UTC personnel or waste disposal vendors.

- PCB Wastes. When feasible, these wastes are shipped within thirty days following TSCA guidelines. If it is necessary to hold a drum for longer than thirty days, it will be stored at Storage Facility (2233) in a hazardous waste storage shed that meets the requirements for

PCB storage (Shed O). When PCB wastes are stored in Shed O, all other wastes are removed from Shed O.

- Flammable Solids. Flammable solids such metallic powders (aluminum oxide, and other metal oxides) are handled and stored in a separate area at the Storage Facility (2233). Flammable solids are sent out in original containers when possible or in another type of DOT-approved container.

- Solids. Solid virgin products sent out as waste will be sent in the original container if it meets DOT standards. These products may be labpacked if they are in containers of five gallons or less. Labpacking may be conducted by RCRA Facilities personnel or waste disposal vendors.

- Oil and Coolants. Oil and coolants are handled in 55-gallon drums at the Storage Facility (2233). The drums of oil and coolant are shipped offsite for fuel blending. Oil and coolants are sometimes transported by vacuum truck.

- Thoriated Compounds (mixed waste). The thoriated waste can be in a fine powder form or in large pieces. When the waste is present at the Storage Facility (2233), it is stored in Shed T and all other wastes are removed from Shed T. The DHS limit for magnesium/thorium is a total of 500 pounds onsite at one time. Therefore, a maximum of 500 pounds could be present at the Storage Facility (2233). The waste is typically shipped as mixed waste in special containers for offsite encapsulation and ultimate land disposal.

- Batteries. Batteries (as described in 40 CFR 273.2) are managed as universal wastes. Universal wastes may be accumulated at the point of origin for up to one year. The waste batteries are labeled "Universal Waste – Batteries". Batteries are segregated from other wastes and recycled by a state-approved recycler or sent to an approved TSDF.

- Lead-acid Storage Batteries. Lead-acid storage batteries (as described in 22 CCR §§ 66266.80 *et seq*.) may be accumulated at the point of origin and at Storage Facility (2233) for up to one year in quantities of less than one ton. Such items, if transferred off-site for disposal and not for use, re-use, recycling, or reclamation, will be managed as hazardous waste in accordance with 22 CCR § 66266.81(a)(4).

- Pesticides. Pesticides (as described in 40 CFR 273.3) are managed as universal wastes. Universal wastes may be accumulated at the point of origin for up to one year. The pesticide wastes are labeled "Universal Waste – Pesticides".

- Mercury Thermostats. Mercury Thermostats (as described in 40 CFR 273.4) are managed as universal wastes. Universal wastes may be accumulated at the point of origin for up to one year. The waste mercury thermostats are labeled "Universal Waste – Mercury Thermostats".

- Fluorescent Tubes. This waste stream is managed as a universal waste. Universal wastes may be accumulated at the point of origin for up to one year. Fluorescent tubes are labeled "Universal Waste – Fluorescent Tubes" and are sent off site in special containers for

recycling when ever possible. A small portion of this waste stream may be sent offsite for ultimate disposal.

A flowchart showing overall site handling of drummed waste is presented in Appendix K.

9.1.3.4 Energetic Wastes Handling Procedures

The operational procedures practiced by UTC in the handling of waste propellant and energetic wastes are described in Work Instruction 23.06.06. This procedure is a typical example and minor modifications will be made without notification to the agencies. The agencies will be notified of substantial modifications or changes on a timely basis. This procedure is included in Appendix M.

9.1.4 Storage Facility (2233) Operating Procedures

9.1.4.1 General Operating Procedures

After receipt and prior to shipment offsite, containers may be opened to visually verify contents or test for corrosivity, if applicable, and to maximize consolidation of each type of waste. Containers are then staged by hazard class in the appropriate quadrant of the waste pad. A draft of the Uniform Hazardous Waste Manifest is completed, and all pertinent documents are attached to the manifest, including container contents, waste notifications, land disposal restriction notifications, DOT Emergency Response Guides, and shipping documents. The appropriate DOT and hazardous waste shipping labels are affixed to the containers. See Figure 7-10 for an example of a hazardous waste container label. The completed draft manifest is reviewed to ensure that the manifest is correctly completed.

9.1.4.2 Check In/Weigh In

Upon delivery at the Storage Facility (2233), containers of waste are unloaded in a contained staging area. Each container is weighed. The weight is recorded on the container label. The weight and arrival dates are recorded on the Storage Facility (2233) database.

The containers are segregated by chemical compatibility (see Figure 6-1) and moved to the appropriate quadrant of the Storage Facility (2233) concrete slab. Table 9-1 lists where containers are stored in each quadrant based on DOT hazard class and in accordance with the chemical compatibility chart shown as Figure 6-1. Aisle space between rows is maintained at a minimum of three feet. Some hazard classes such as corrosives and flammable solids are typically stored in hazardous waste sheds. Each shed contains only one hazard class and is properly identified as to the hazard class it contains.

TABLE 9-1
DOT HAZARD CLASS QUADRANT DESIGNATIONS

DOT Hazard Class	Quadrant A	Quadrant B	Quadrant C	Quadrant D	Sheds
Class 2		X		X	X
Class 3	X	X			X
Class 4					X
Class 5					X
Class 6		X	X		X
Class 7					X
Class 8 acid				X	X
Class 8 base			X		X
Class 9	X	X	X	X	X

9.1.4.3 Container Management

The basic guidelines followed at the Storage Facility (2233) for container management are as follows:

- Only approved containers that are compatible with the material being accumulated shall be used. Containers must be in good condition, free from bulges, dents and rust.

- Containers are segregated by compatibility and staged in the appropriate quadrant of the pad, or in a containment shed.

- The designated aisle space on the storage slab is maintained at a minimum of 3 feet.

- Containers are kept closed except when the waste is added to or removed from the container. All the containers stored on the pad are protected from the exposure to the weather.

- Containers meeting the definition of empty per Title 22 California Code of Regulation, Section 66261.7, are either reused to hold similar compatible wastes or crushed and sent for metal recycling or disposed of as non-hazardous waste.

- Containers must not be overfilled, and adequate headspace must be retained to allow for thermal expansion of waste materials.

- Good housekeeping shall be practiced at all times. If the condition of the container deteriorates during waste accumulation or storage, the contents shall be immediately transferred to another container that is in good condition or overpacked in DOT approved container.

- If ignitable waste is being added or removed from a container, the container must be properly grounded and non-sparking tools must be used to open and close the container.

9.1.4.4 Transportation

RCRA Facilities personnel supervise loading of the truck for shipment. Once the truck is loaded, the driver signs the manifest and completes the transporter identification number. The driver receives the manifest. Storage Facility (2233) personnel maintain the yellow and blue copies of the manifest for record keeping purposes for a minimum of 3 years.

9.1.4.5 Other Storage Facility (2233) Guidelines

The Storage Facility (2233) is inspected weekly (see Appendix N for the form). Hazardous waste workers at the Storage Facility (2233) are instructed in the use of safety equipment as required. All handling equipment is properly stored and maintained in serviceable condition. The work area is kept in a neat and orderly fashion. Calibration of equipment is monitored and notification procedures are in place to ensure that equipment is properly calibrated. All drums are appropriately labeled as to contents and with accumulation start dates.

Adequate personal protective equipment is available at the Storage Facility (2233). Employees at Station 2233 follow decontamination procedures that include the following:

- Disposable PPE are placed in designated waste containers or consolidated into a similar existing waste drum.
- Equipment that is not disposable, such as respirators, is washed with soapy water and air dried.
- Wash water is collected in the secondary containment tanks.

Procedures used at the Storage Facility (2233) to minimize the potential for fire and explosion include:

- Weekly facility inspection and review.
- Proper segregation of incompatible wastes.
- Evaluation of wastes before shipment to the facility to identify explosive wastes and prevents their shipment to the facility.
- Use of grounding straps when flammable materials are being transferred.
- Flame-producing devices are forbidden.
- Fire extinguishers are regularly inspected and maintained.

9.1.5 Storage Magazine (0312) Operating Procedures

9.1.5.1 General Operating Procedures

After receipt and prior to shipment offsite, containers may be opened to visually verify contents or test for corrosivity, if applicable. Containers are then staged by hazard class.

Energetic waste that is to be disposed of offsite may be consolidated before shipment. A draft of the Uniform Hazardous Waste Manifest is completed, and all pertinent documents are attached to the manifest, including container contents, waste notifications, land disposal restriction

notifications, DOT Emergency Response Guides, and shipping documents. The appropriate DOT and hazardous waste shipping labels are affixed to the containers. See Figure 7-10 for an example of a hazardous waste container label. The completed draft manifest is reviewed to ensure that the manifest is correctly completed.

9.1.5.2 Container Management

The basic guidelines followed at the Storage Magazine (0312) for container management are as follows:

- Only approved containers that are compatible with the material being accumulated shall be used. Containers must be in good condition.
- Containers are segregated and staged by compatibility.
- Aisle space is maintained so that secondary containments can be easily inspected.
- Containers are kept closed except when the waste is added to or removed from the container.
- Containers must not be overfilled. Adequate headspace must be retained to allow for thermal expansion of waste materials, as needed.
- Good housekeeping shall be practiced at all times. If the condition of the container deteriorates during waste accumulation, storage, or transportation, the contents shall be immediately transferred to another container that is in good condition or overpacked in DOT approved container.
- If ignitable waste is being added or removed from a container, the container must be properly grounded and non-sparking tools must be used to open and close the container, as appropriate.

9.1.5.3 Transportation Offsite

RCRA Facilities personnel supervise loading of the truck for shipment offsite. Once the truck is loaded, the driver signs the manifest and completes the transporter identification number. The driver receives the manifest prior to shipment. Storage Facility (2233) personnel maintain the yellow and blue copies of the manifest for record keeping purposes for a minimum of 3 years.

9.1.5.4 Other Storage Magazine (0312) Guidelines

Hazardous waste workers at the Storage Magazine (0312) are instructed in the use of safety equipment as required. All handling equipment is properly stored and maintained in serviceable condition. The work area is kept in a neat and orderly fashion. Calibration of equipment is monitored and notification procedures are in place to ensure that equipment is properly

calibrated. All containers are appropriately labeled as to contents and with accumulation start dates.

Adequate PPE is available. Employees at Station 0312 follow decontamination procedures that include the following:

- Disposable PPE are placed in designated waste containers.
- Equipment that is not disposable, such as respirators, is washed with soapy water and air dried.

Procedures used at the Storage Magazine (0312) to minimize the potential for fire and explosion include:

- Weekly facility inspection and review.
- Proper segregation of incompatible wastes.
- Use of grounding straps.
- Flame-producing devices are forbidden.
- Fire extinguishers are regularly inspected and maintained by the ERT.

9.1.6 Shipping

Before shipping hazardous wastes or offering hazardous wastes for shipment offsite for disposal, UTC wastes are packaged, labeled, marked, and placarded in compliance with the applicable DOT regulations contained in 49 CFR Parts 172, 173, 178, and 179.

All transporters and treatment, storage, or disposal facilities shipping, treating, storing, or disposing of UTC hazardous wastes are required to have valid identification numbers.

9.1.7 Uniform Hazardous Waste Manifests and Shipping Papers

All hazardous wastes transported over public highways must comply with manifest requirements established by the Resource Conservation and Recovery Act (RCRA), the DOT, and any requirements set forth by States in which the wastes are shipped. Hazardous waste manifests generated prior to shipment must include all information required by applicable sections of 40 CFR Part 262 and 49 CFR in addition to any other information required by state regulations (see Appendix O for a copy of the Uniform Hazardous Waste Manifest).

Waste shipments subject to LDRs are accompanied by certification and notification forms. In most cases, the LDR notification form provided by the disposal facility is used. Typical examples are also shown in Appendix O. The form may change in content to meet changes in regulations or other information needs without prior agency approval. These completed forms satisfy the following information requirements for restricted wastes:

- Identification of US Environmental Protection Agency (EPA) and state hazardous waste numbers;

- Reference to the corresponding treatment standards (either performance based or as specific technologies), and the applicable land disposal prohibitions;

- An indication of how the restricted waste must be managed;

- The manifest number associated with the waste shipment; and

- Certification statements and authorized signatures.

9.1.8 Record Keeping

Records of waste shipments are maintained by RCRA Facilities personnel. Records for waste shipments to recycling facilities include the name and location of the recycling facility. A copy of the manifest for each shipment of waste from the UTC facility is sent to DTSC or other appropriate regulatory agency within 30 days of the shipment date. Treatment, storage and disposal facilities receiving hazardous waste from UTC also send a copy of the manifest for each waste shipment to DTSC or other appropriate regulatory agencies.

The transporter or appropriate treatment, storage, or disposal facility is contacted and notified if a copy of the signed waste manifest is not received by UTC within 35 days of the shipment date. DTSC notification is made by submittal of an Exception Report, as defined in 22 CCR §66262.42, if a copy of the signed waste manifest is not received by UTC within 45 days of the initial shipment date.

Copies of all signed manifests and exception reports are kept for a minimum of three years from the date of shipment. Records of generation, transfer, and consolidation of wastes within the UTC facility are also maintained for three years.

9.1.9 Waste Minimization

A waste minimization program is in effect at the UTC facility to reduce the volume and toxicity of hazardous wastes generated to the extent practicable. Furthermore, to the extent required to address wastes to which the program would be applicable, the program addresses the need to ensure that the treatment, disposal or storage methods used to manage site hazardous wastes are the practicable methods currently available to minimize any present and future threat to human health and the environment. An SB-14 waste minimization report was prepared in 1991, 1995, 1999, and 2003.

9.2 Inspection Schedules and Procedures

9.2.1 Storage Facility (2233) Inspection Schedule and Procedures

An inspection of the Storage Facility (2233) is conducted once each operating week that operations are being conducted at UTC. A copy of a typical inspection checklist is shown in Appendix N. RCRA Facilities personnel perform a visual inspection of the waste storage area for cracks or gaps in the pad coating, leaks or spills, drum and pallet conditions, and any other potential problem areas. Visual inspections are focused on insuring that no wastes are released to the environment.

If a deficiency is noted during the inspection, the problem is noted on the inspection form. In all cases, leaks or spills are cleaned up as soon as possible. Supervisory personnel are alerted to the problem and are responsible for initiating necessary corrective actions and ensuring that timely corrective action is taken and completed to prevent any health or environmental exposure. Repairs/corrective actions are noted on the inspection forms. Inspection records are retained by RCRA Facilities personnel for three years from the date of inspection.

9.2.2 Storage Magazine (0312) Inspection Schedule and Procedures

The Storage Magazine Facility (0312) is inspected once each operating week that operations are being conducted at UTC using the Hazardous Waste Storage Weekly Inspection form. Records indicating the date and time of inspection, name of inspector, observations made, date of any repairs, and nature of any repairs will be maintained at UTC for a minimum of three years. If any leaks or spills are observed during the inspection, they will be cleaned up within 24 hours or as soon as feasibly possible. Supervisory personnel will be alerted to the problem and are responsible for initiating appropriate clean-up actions to prevent exposure to human health and the environment.

9.3 Precautions for Ignitable and Reactive Wastes

Incompatible waste will be separated from each other. Wastes will be protected from sources of ignition including, but not limited to:

- Open flames,
- Smoking,
- Cutting and welding,
- Hot surfaces,
- Sparks (static, electrical, mechanical), and
- Frictional heat.

9.4 Operating Record

A written operating record is maintained until closure of the UTC facility. Records are retained and available for inspection for a minimum of three years. Records are kept to meet required regulatory record retention schedules. The information contained in the operating record will include:

- Copies of completed hazardous waste manifests for offsite shipments;
- Copies of hazardous waste profiles;
- Current inventory of wastes at the Storage Facility (2233) and the Storage Magazine (0312);
- Results of inspections, monitoring, testing, and analytical data;
- Summary reports of incidents involving contingency plan implementations;
- Hazardous waste shipping logs;
- Records and results of waste analyses conducted in accordance with the Waste Analysis Plan;
- Copy of closure cost estimate; and
- Certification that a program is in place to reduce the volume of hazardous waste.

9.5 Water Quality Monitoring

Monitoring to detect, characterize, and respond to releases to groundwater, surface water, or the unsaturated zone is not required under RCRA for the Storage Facility (2233) and the Storage Magazine (0312). The hazardous waste activities at these facilities do not include the use of surface impoundments, waste piles, land treatment units, or landfills.

10 PERSONNEL TRAINING

This section pertains to regulations 22 CCR §66270.14(B)(12) and §66264.16.

10.1 General Training Requirements

UTC employees involved in processes which generate hazardous waste, or who may need to be aware of emergency response procedures, receive training to ensure compliance with applicable state and federal regulations. Typically, supervisors make determinations on which UTC employees should attend training within a given department based on the following guidelines:

- Employees involved in processes that generate hazardous waste.
- Employees who respond to emergencies involving hazardous waste by notifying others and evacuating as necessary.

UTC has a chemical safety training program that is intended to inform UTC employees of the safe handling, storage, and use of hazardous materials. Included in this program are health and safety orientation, fire prevention training (fire extinguisher use), right-to-know (hazard communication), and employees roles in emergencies. Introductory training consists of, but is not limited to:

- Health and safety orientation;
- Fire prevention training;
- Right-to-Know (Hazard Communication);
- Power vehicle training;
- Hazardous waste operations;
- On-the-job training; and
- Contingency plan implementation.

Contractors involved in decommissioning and remediation processes that generate hazardous waste are required to conduct and document appropriate safety training. Decommissioning and remediation contractors are also required to comply with all applicable federal, California and local environmental laws, regulations, codes, permits, permit conditions, rules and statues.

10.2 RCRA Facility Specific Training Requirements

All employees who routinely handle, package, store, treat, or transport hazardous wastes are trained to recognize and avoid potential safety, health, and environmental hazards associated with their jobs. Retraining is provided, as required, based on changes in procedures, materials, or processes. Standard operating procedures have been written for protective clothing requirements, equipment inspection, and shutdown procedures for both normal and emergency situations.

10.2.1 Job Duties

In general, personnel directly involved in handling hazardous waste at the RCRA facilities fall under two job classifications. These job classifications, and the duties associated with them, can change depending on organizational and operational changes. The following is a listing of the current positions and job duties of each:

Person	Skills	Education	Updates	Regulatory Reference
Supervisor	RCRA hazardous waste management knowledge. Effectively supervise employees.	BA/BS or equivalent with demonstrated knowledge	Annual review of initial training or recertification of required skills	22CCR 66264.16
Technician	Employees able to perform operations and handle wastes.	AA/AS or equivalent with demonstrated knowledge	Annual refresher and certification	22CCR 66264.16

Supervisor

The Supervisor oversees and coordinates all processes and activities of technicians involved in packaging, labeling, and preparing for shipping of hazardous waste. He supervises daily work of technicians and actively assists subordinates in day-to-day tasks as required. The principal responsibilities of the Supervisor, or his designee, may include, but are not limited to, the following:

- Instructs, assigns, checks, and reviews work of technicians and the staff;
- Ensures site-wide compliance with procedures and the most current regulations pertaining to hazardous waste storage, treatment, and shipping;
- Oversees maintenance of required documentation associated with hazardous waste operations including but not limited to: inspection reports; manifests; waste profiles; and program financial reports;

- Performs continual analyses of established procedures as they affect assigned functional responsibilities and develops, recommends or initiates new or revised procedures and practices, materials or equipment contributing to improved efficiency and economy;

- Ensures compliance of all hazardous waste storage and treatment area operations with applicable regulatory requirements;

- Coordinates the profiling, scheduling, and associated preparation of hazardous waste shipments from the Storage Facility (2233);

- Develops and coordinates technical work assignments with shipping schedules to ensure regulatory, as well as internal procedural deadlines are met;

- Reviews housekeeping practices at the facility; and

- Is responsible for complying fully with all safety and environmental requirements.

Technician

The Technicians at the RCRA facilities are responsible for performing operations related to the handling and disposal of hazardous wastes. Duties may include, but are not limited to, the following:

- Coordinates activities with generators and properly identifies, transports, segregates, labels and manifests hazardous wastes in preparation for disposal or treatment;

- Receives hazardous wastes and ensures each is properly packaged, labeled, profiled, and manifested prior to shipment;

- Coordinates the profiling, scheduling, and associated preparation of hazardous waste shipments from the Storage Facility (2233) and the Storage Magazine (0312);

- Maintains appropriate inventories of supplies to sustain hazardous waste operations;

- Uses and maintains necessary equipment associated with the handling of hazardous wastes;

- Maintains safety and environmental compliance, cleanliness and organization of the Storage Facility (2233) and the Storage Magazine (0312);

- Interacts with hazardous waste generating personnel regarding compliance and packaging discrepancies;

- Assists in field coordination in the absence of the Supervisor; and

- Performs other duties as required by the Supervisor.

10.2.2 Introductory Training

New employees may be given both classroom and on-the-job training. On-the-job training is conducted under close supervision of an experienced operator. Typically, a "buddy" system is used for initial on-the-job training. Introductory training consists of, but is not limited to:

- Health and safety orientation;
- Fire prevention training;
- Right-to-Know (Hazard Communication);
- Power vehicle training;
- Hazardous waste operations;
- On-the-job training; and
- Contingency plan implementation.

10.2.3 Continuing Training

On-going education and training is a continual process. Continuing training focuses primarily on classroom and refresher courses in various subjects related to hazardous waste management. Typically, RCRA facility personnel complete a 40-hour course in hazardous waste operations and emergency response. An 8-hour refresher class is required on an annual basis after satisfactorily completing the initial course. All courses are taught by qualified instructors trained in hazardous waste management procedures. The following table shows the regulatory requirements that are met through the typical refresher or annual courses:

Person	Includes	Training Subjects	Training Criteria	Updates	Regulatory Reference
Cal/EPA – RCRA Hazardous Waste Management					
Large quantity generator or TSDF personnel	Anyone who could cause non-compliance at the facility	Duties which ensure the facility's compliance with EPA rules	Established by the generator in a written training plan	Annual review of initial training	22CCR 66264.16
DOT – HMTA – Hazardous Materials Transportation					
Hazmat employees	Employees who directly affect transportation safety	Compliance with DOT rules and safety	Determined, tested and certified by the employer	Repeated at least every three years; train in rule changes as they occur.	172.700, 173.1(b)

Cal/OSHA – HAZWOPER – Certain Hazardous Waste Operations					
TSDF site employee	Employees exposed to health hazards or hazardous substances at TSDF sites	To enable employees to perform their assigned duties in a safe and healthful manner	Specified as minimum time (e.g., 24 hours for general site employees)	8 hours annual refresher	5192(p)(7)
Emergency responder	Employees who respond to emergencies other than regulated above	Understand hazards, recognize emergencies, response actions, etc.	Both content and minimum time specified	Annual refresher	8CCR 5192(q)(4)-(8)

Specific training given to RCRA facility personnel includes, but is not be limited to, the following topics:

TRAINING	**SUPERVISORS**	**TECHNICIANS**
Emergencies		
Facility Evacuation Routes	Yes	Yes
Emergency Coordinators	Yes	Yes
Emergency Equipment Use	Yes	Yes
Emergency Procedures Review	Yes	Yes
Location of Emergency Equipment	Yes	Yes
Arrangements with Agencies	Yes	Yes
Post-Emergency Record Keeping	Yes	Yes
Labels		
How to Fill Out Labels Completely	Yes	Yes
Accumulation Start Dates	Yes	Yes
Hazardous Properties of Wastes	Yes	Yes
Marking of Waste Tanks	Yes	Yes
Compatibility/Storage		
Incompatibility Hazards	Yes	Yes

Waste Inspection Procedures	Yes	Yes
Closed Container Requirements	Yes	Yes
Aisle Space Requirements	Yes	Yes
Accumulation Time Limits	Yes	Yes
Prevention of Accidental Releases	Yes	Yes
Empty Container Regulations	Yes	Yes
Manifests/Receipts		
When to Use Manifests/Receipts	Yes	Yes
How to Use Manifest/Receipts	Yes	Yes
Generator/DTSC/TSDF Manifest Copies	Yes	Yes
Waste Shipment Record Keeping	Yes	Yes
Proper Waste Shipping Descriptions	Yes	Yes
Manifest Exception Reports	Yes	Yes
Other		
Hazard Communication	Yes	Yes
Power Vehicle Training (including forklift)	No	Yes
Material Handling	Yes	Yes
Hazardous Waste Operations	Yes	Yes
Contingency Plan Implementation	Yes	Yes
Personal Protective Equipment (PPE)	Yes	Yes
Respiratory Safety Training	Yes	Yes
Standard Operating Procedures	Yes	Yes
Waste Sampling Procedures (only required of technicians who perform sampling)	No	Yes
Internal Spill Reporting	Yes	Yes
Medical Surveillance	Yes	Yes

Additional training given to RCRA facility personnel includes, but is not be limited to, the following topics:

- Waste sampling procedures,
- Forklift, truck and material handling, as appropriate,
- Respiratory safety training,
- Personal protective equipment,
- Standard operating procedures,
- Contingency plan implementation,
- Hazard communication, and
- Medical surveillance.

10.2.4 Implementation

RCRA Facility personnel are required to attend Safety orientation and Right-to-Know training. Training of personnel is designed and tracked by the person's supervisor or company. Core training classes such as forklift training or respirator training are completed as soon as is practical. RCRA Facility personnel must be trained to properly operate forklifts before operating any forklift. Other training classes are taken at the person's earliest opportunity. Training is completed within 6 months after date of employment.

New RCRA Facility personnel are typically assigned to work with at least one experienced employee. This on-the-job training may last up to thirty days, depending on the specific job assignment or on the employee's abilities. Training requirements are reviewed for employees an annual basis. For new employees or newly assigned employees, requirements are reviewed after thirty days.

10.3 Emergency Response Team

10.3.1 General

The ERT is an onsite contractor with a staff of professional firefighters assigned to respond to site fires, hazardous materials releases, and medical emergencies. In this capacity, ERT personnel receive extensive training to provide the necessary response action for each of the emergency situations noted.

ERT personnel are trained in the operation of various types of fire equipment, fire prevention, and fire fighting including specialized training in hazardous materials response. In addition, emergency medical training is provided to all ERT members.

The ERT conducts regular training of all members. ERT personnel on shift have been designated hazardous material responders and are provided special and on-going training.

Training for ERT personnel is provided by instructors certified by the State Fire Marshal's office or by the Industrial Emergency Council and includes the following:

Person	Includes	Training Subjects	Training Criteria	Updates	Regulatory Reference
Cal/OSHA – HAZWOPER – Certain Hazardous Waste Operations					
Emergency responder	Employees who respond to emergencies	Understand hazards, recognize emergencies, response actions, etc.	Both content and minimum time specified	Annual refresher	8CCR 5192(q)(4)-(8)

10.3.2 Job Duties

Typical UTC and ERT job titles and responsibilities are described below. These job titles and responsibilities can change depending on organizational and operational changes.

UTC Emergency Coordinator:

The Emergency Coordinator is responsible for directing emergency and spill response activities. The Emergency Coordinator is responsible for developing and implementing strategic decisions and is authorized to commit the necessary resources to resolve any emergency. During an incident response, the Emergency Coordinator duties include the following:

- Coordinate ERT response and notify other response personnel, as needed.
- Coordinate rescue and response actions as previously arranged with all response personnel.
- Provide necessary information to the UTC Environmental Department, who is in contact with the appropriate federal, California, and local authorities with designated response roles.
- Identify the character, exact source, amount, and extent of a release, as well as the other information needed for notification, if the incident involves a release of oil or a hazardous substance.
- Assess the interaction of any spilled substance with water and/or other substances stored at the UTC, and notify response personnel at the scene.
- Assess the possible hazards to human health and the environment due to any release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects

of any toxic, irritating, or asphyxiating gases that may be generated or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and a heat-induced explosion).

- Assessing and implementing prompt removal actions to contain and remove any released substance.

- Directing response actions until the incident is concluded.

ERT Lieutenants:

- Hazard notice follow-up

- Employee education and training programs

- Inspections of site, buildings and fire protection equipment

- Assurance of proper training of ERT members

- Supervision of respective shifts

- Training of shift personnel

- Response to fire, medical and hazardous materials emergencies

- Inspections

- Training

- Special standbys

- Sprinkler and alarm tests

- Various fire protection duties

- Additional duties as assigned, vehicle accident reports, animal control and disposal

ERT Firefighters:

- Response to fire, medical and hazardous materials emergencies, documentation of patient contact reports, giving patient report to paramedics along with documentation during patient transition.

- Inspections

- Training

- Special standbys
- Sprinkler and alarm tests
- Various fire protection duties
- Fire equipment maintenance
- Hazard reduction of weeds, brush, assisting California Conservation Crews with disposal of vegetation
- Assisting security force with daily vehicle inspections of personnel entering/exiting the site
- Maintaining current certifications, State License, Drivers License, Ambulance Drivers License, medical examiners certification, hazardous material recertifications
- Maintaining patient care within the company dispensary for personnel requiring medical attention

10.3.3 Emergency Response Personnel Training

Training for emergency response personnel varies depending on the job title and responsibilities of the employee. Training programs are certified by outside agencies or individuals such as the Industrial Emergency Council and the State Fire Marshal. The frequency of training updates also varies with the employee's position, as follows:

Person	Includes	Training Subjects	Training Criteria	Updates	Regulatory Reference
Cal/OSHA – HAZWOPER – Certain Hazardous Waste Operations					
Emergency responder	Employees who respond to emergencies	Understand hazards, recognize emergencies, response actions, etc.	Both content and minimum time specified	Annual refresher	8CCR 5192(q)(4)-(8)

10.3.4 Implementation

Currently, the Emergency Coordinator is a UTC employee. The ERT is manned by a contractor. The ERT members come onsite already trained and certified. There are also several members of Security that worked in the former UTC Fire Department, are already trained, and may provide support. The Security supervisor reviews the ERT to ensure that the training is current.

10.4 Security

Security personnel for the UTC facility are provided with a hazard awareness training course. Course content includes information related to fire awareness and prevention, emergency incident command procedures, and hazardous materials response. Employees are also provided with information on the waste handling operations at the RCRA facilities as well as at the various generation sites located throughout the UTC facility.

10.5 Training Records

Training records for each UTC employee are maintained by the employee's supervisor. Attendance sheets from onsite classes are maintained on file. Attendance and completion records for Hazardous Material Operations training and Hazardous Material First Responder training are maintained until facility closure. For current employees, records are kept until facility closure. Records for former employees are kept for at least three years after employee resignation.

Training records for contracted RCRA Facility personnel are maintained by the person's supervisor or company. Attendance and completion records for Hazardous Material Operations training and Hazardous Material First Responder training are maintained until facility closure. For current RCRA Facility personnel, records are kept until facility closure. Records for former RCRA Facility personnel are kept for at least three years after employee resignation.

11 CONTINGENCY PLAN AND EMERGENCY PROCEDURES

This section pertains to regulation 22 CCR §66270.14(B)(7).

Appendix I contains the *Integrated Incident Response and Contingency Plan* for the UTC facility. This plan was developed to outline the emergency incident responses and management procedures in place at the facility should an emergency occur. The plan includes spill and fire prevention control measures for all hazardous waste management units, general preparedness and prevention procedures, emergency coordinator and incident command information, and the procedures for the documentation and notification of releases to appropriate agencies. The Integrated Incident Response and Contingency Plan will be amended as necessary whenever any changes occur to the facility (operational or physical); the plan fails in an emergency; the hazardous waste facility permit is revised; information in the plan changes (equipment and/or list of emergency coordinators); or there are changes in applicable regulations.

Figures 8-1 and 8-2 provide the general evacuation routes for the Storage Facility (2233) and the Storage Magazine (0312), respectively.

12 ENVIRONMENTAL PERMITS

This section pertains to regulation 22 CCR §66270.14(B)(19). Copies of facility permits contained in this section represent permit status at the time of preparation of this document. Since all permits are subject to revision, modification, expiration, and renewal, no effort will be made to continually update the status of each individual permit contained herein on an ongoing basis. Rather, permit status will be updated during revisions to this Part B permit application, or as required by regulatory agencies. All current facility permits in effect are available for review or examination at any time.

12.1 Conditional Land Use Permits

The facility has two Land Use Permits from the County of Santa Clara Planning Commission. The County of Santa Clara issued the first Use Permit for the UTC site on November 18, 1959, and subsequently amended it on December 4, 1963. The second Use Permit was issued on December 18, 1963. Copies of the Land Use Permits are included in Appendix P.

12.2 BAAQMD Permits to Operate

UTC holds air permit S-088 from BAAQMD to operate a drum compactor at the Storage Facility (2233). UTC is limited to handling a maximum of one ton of material per hour. Emissions from the drum compactor are abated with activated carbon. Copies of the BAAQMD Permits to Operate are included in Appendix Q.

12.3 Water Discharge Permits

Wastewater discharges at UTC, including those to the waters of the state, are regulated under Order No. 95-190 Waste Discharge Requirements (WDR) adopted on September 14, 1995 by the Regional Water Quality Control Board (RWQCB). A copy of the WDR is included in Appendix R. In addition, UTC has also been issued Site Cleanup Requirements (SCR) for treated ground water (SCR Order No. R2-2004-0032 in Appendix S). UTC also complies with Storm Water NPDES General Permit Number CAS000001.

12.4 Hazardous Materials Storage

The Santa Clara County Department of Environmental Health has issued hazardous materials storage permits for the UTC facility. These permits are renewed annually. A current list of these permits is presented in Appendix U.

12.5 Hazardous Waste Permits

DTSC issued the original Hazardous Waste Facility Permit for hazardous waste storage effective September 26, 1983. A copy of the current permit for the Storage Facility (2233) and the Storage Magazine (0312), with an effective modification date of November 26, 2003 and an expiration date of June 20, 2007, is provided in Appendix B.

In October 1983, DTSC issued an operating permit for three surface impoundments at Station 0250, 0635, and 0750. Surface impoundment operations have since concluded, and in October 1991, the impoundments were certified as closed in accordance with the approved closure plan for the RCRA units. On February 28, 1992, RWQCB approved the closure of these units. A copy of the RWQCB letter is presented at the end of Appendix B.

In 1993, UTC applied for and received approval to operate two hazardous waste treatment units: the drum crusher at the Storage Facility (2233) and the Silver Recovery Unit at Station 1319S. These units are operated as conditionally exempt units under DTSC's Permit-By-Rule tiered permitting program. A copy of the DTSC approval letter for these units is presented at the end of Appendix B.

On September 8, 1999, UTC filed a Notification of "Silver-Only" Hazardous Waste Treatment Form with DTSC and Santa Clara County Health Department/Hazardous Materials Compliance Division that covered the CESW silver treatment process. UTC has stopped using the Silver Recovery Unit at Station 1319S and intends to close the unit under Santa Clara County.

On December 6, 1999, DTSC approved the closure plan for the Open Burning Facility. The RCRA treatment facility had not received wastes since October 18, 1996. The closure certification report was submitted to DTSC on June 2, 2000. The Open Burning Facility is expected to go into post-closure in 2006.

12.6 Clean Water Act Section 404 Permit

One of the remediation activities involves treating impacted surface water within Waters of the State near Oxidizer Road. To perform work within Waters of the State, UTC holds a Clean Water Act Section 404 permit under the US Army Corps of Engineers Nationwide Permit 38 and a Section 401 Water Quality Certification issued by RWQCB.

After receiving the Section 404 permit, California Red-Legged Frogs (a threatened and endangered species) were found in the work area. UTC consulted with the US Fish and Wildlife Service and the California Department of Fish and Game on how to protect the threatened and endangered species. The California Regional Water Quality Control Board and the Army Corps of Engineers were also included in protection planning, as potential impacts to endangered or threatened species are included in their permitting processes. UTC implemented several measures at the work area to prevent the taking of California Red-Legged Frogs, which included using biological monitors to verify that no protected species are harmed.

On August 23, 2005, the US Fish and Wildlife Service designated critical habitat for the Central population of the California Tiger Salamander pursuant to the Endangered Species Act of 1973,

as amended (50 CFR Part 17, Federal Register, Volume 70, Number 162, 49380). The critical habitat is located within 19 counties in California and includes a portion of the UTC site.

With the planned decommissioning and remediation activities coupled with the presence of California Red-Legged Frogs and California Tiger Salamanders onsite, UTC prepared a Joint Aquatic Resources Permit Application in early 2006 for a US Army Corps of Engineers Programmatic Individual Section 404 Permit to implement the site closure and remediation programs. UTC expects to receive the Programmatic Individual Section 404 Permit in June 2006.

Part of the Programmatic Individual Section 404 Permit includes compliance with Section 106 of the Historical Preservation Act. Although it is not expected to encounter Native American Burials, isolated human remains, and associated grave objects at UTC, measures will be taken to protect the aforementioned should they be encountered.

13 RECORDS AND REPORTS

This section pertains to regulations 22 CCR §66262.42, §66264.70 through §66264.77 and §66270.14(B)(19).

13.1 General

The following records and reports (forms) are maintained by UTC for the operation of site hazardous waste facilities and are available for inspection by authorized regulatory agency personnel, upon request:

- Uniform Hazardous Waste Manifests;
- Daily and Weekly Inspection Reports;
- Annual reports (when requested by the DTSC);
- Hazardous waste tax reports;
- Incident reports; and
- Additional reports.

The Environmental Department has the responsibility for coordinating and maintaining all facility hazardous waste operational records and reports involving regulatory agencies, including the US EPA, the DTSC, and the RWQCB.

13.2 Uniform Hazardous Waste Manifest

A copy of all process waste manifests is sent to the DTSC and, if applicable, to environmental agencies of other states within 30 days of shipment. A second copy of the manifest is kept in an active file until the copy from the disposal facility is received. If the return copy is not received within 35 days of shipment, per 22 CCR §66262.42, inquiries are made to both the waste transporter and waste disposer. Any manifest discrepancies that are unresolved are reported to DTSC within 15 days of receiving waste. Copies of Uniform Hazardous Waste Manifests are maintained for 3 years.

13.3 Annual Reports

Annual reports are submitted to DTSC and the US EPA Regional Administrator, as requested. The reports include the following information:

- Facility ID number, name, and address;

- Calendar year covered by the report;
- Types, quantities, and methods of treatment, storage, or disposal of hazardous wastes handled during the previous year;
- Method of storage for hazardous waste;
- Identification number, name, and address of each generator for which hazardous waste was received;
- The most recent closure cost estimate;
- A description of waste minimization efforts undertaken to reduce the volume and toxicity of waste generated;
- Signed certification; and
- A description of changes in volume and toxicity of waste achieved in current years vs. prior years.

All records above will be maintained at UTC at all times and will be available for review by DTSC and US EPA personnel.

13.4 Hazardous Waste Tax Reports

Hazardous waste tax reports are submitted to the California Franchise Tax Board.

13.5 Incident Reports

Reports of all discharges or releases involving the implementation of the Contingency Plan are maintained on file. Accidents that could result in a hazard to public health and safety, domestic livestock or wildlife, or result in a discharge of hazardous waste outside of an area designated by the Part B permit are reported to DTSC within 24 hours. The Santa Clara County Department of Environmental Health (County Health) is notified if cleanup exceeds 8 hours. The RWQCB, County Health, and Office of Emergency Services (OES) are notified of incidents where the quantity of hazardous material or waste released exceeds the reportable quantity (RQ) listed in 40 CFR Part 302, or there is a release or threatened release to the waters of the state.

The incident report includes the date, time, and location of the incident, as well as the material and quantity involved. The name and badge number of the person reporting the incident are recorded. The disposition of the material is noted, and cleanup time recorded. There is also a notification checklist for recording the time, agency, and person notified, along with agency phone numbers. There is space on the report form to record relevant actions, and directions for drawing a map indicating the location and extent of the incident.

13.6 Additional Reports

In addition to submitting the annual reports described in Section 13.4, UTC will report to DTSC the following as applicable:

- Immediate reporting to the California Office of Emergency Services of any imminent or actual emergency situation that may endanger human health or the environment.

- Twenty-four hour oral reporting to the DTSC Branch Chief from the time UTC becomes aware of any non-compliance that may endanger human health or the environment. The report will include information concerning the release of any hazardous substance that may endanger public drinking water supplies. The report will include information concerning the release of any hazardous substance, fire, or explosion that may endanger human health or the environment outside the facility; the report will include a description of the occurrence, its cause, facility name, facility address, facility telephone number, date and time of incident, type of incident, name and quantities of materials involved, extent of injuries, an assessment of hazards to human health and environment outside the facility, and estimated quantity and disposition of recovered material that resulted from the incident.

- Five-day written report to DTSC from the time UTC becomes aware of any non-compliance that may endanger human health or the environment. The report will include a description of the non-compliance and its cause, the period of non-compliance including exact dates and times, whether the non-compliance has been corrected, the anticipated time the non-compliance is expected to continue, and the steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

- Fifteen-day written report to DTSC after any incident that requires implementing the Contingency Plan. The report will include the information in listed in the twenty-four hour reporting.

- Thirty-day written report to the DTSC Branch Chief of detection of a release to the environment from a RCRA tank system. The report will include the likely migration route of the release, soil composition, geology, hydrology, climate, sampling results, distance to drinking water, distance to surface water, distance to populated areas, and description of response actions taken or planned.

- Other non-compliance instances resulting in hazardous waste releases or implementation of the Contingency Plan will be reported to DTSC. The report will include the information in listed in the twenty-four hour reporting.

- Closure of the Storage Facility (2233) or Storage Magazine (0312).

14 CLOSURE PLANS

This section pertains to regulations 22 CCR §66264.112, §66264.113, and §66270.14(B)(13).

14.1 Introduction

The closure plans identify the steps UTC will take to implement closure activities at the Storage Facility (2233) and Storage Magazine (0312) at any point during their intended operating life, and to completely close the facilities at the end of their intended operating life. The plans also address the conditions and reasons under which partial closure will occur. Post-closure plans are not required because these facilities are not disposal facilities and all wastes will be completely removed at closure (clean closure). A copy of the closure plans is kept at the facilities until closure has been completed.

The anticipated date of final closure of the Storage Facility (2233) and the Storage Magazine (0312) is the year 2009. The closure plans present the closure procedures for final closure of the Storage Facility (2233) and Storage Magazine (0312). These closure plans may be revised after assessment sampling is performed; in which case, the revised plan will be submitted to DTSC for review and approval prior to implementation. Any significant modifications to the facilities will result in UTC updating and revising the closure plans accordingly.

UTC will maintain a copy of the approved closure plans and any revisions to the plan at the UTC facility. UTC will provide agency notification at least 45 days prior to the expected date of final closure of either facility. Upon completion of closure of one of the RCRA facilities, UTC will submit to DTSC and the EPA Regional Administrator a certification by both UTC and an independent, registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

14.2 Storage Facility (2233) - Limited Storage Option

UTC anticipates that maintaining the Storage Facility (2233) as a greater-than-90 day storage facility may no longer be necessary in the near future. Should this be the case, hazardous waste would be stored for less than 90 days in compliance with 40 CFR 262.34(a)(1-4), and 22 CCR §66262.34. The conversion from greater-than-90 day storage to less-than-90 day storage would be implemented as soon as practicable and allowing for any changes to federal and state regulatory requirements. Containers would be stored onsite for a maximum of 90 days. All manifest, storage, and handling procedures specified in this Operation Plan would be followed. The total volume of material throughput would not decrease, only the holding time. All equipment would be maintained onsite following the procedures described in Section 9. With DTSC concurrence, final closure activities would be suspended until all hazardous waste management at the facility is discontinued.

14.3 Closure Performance Standards

The closure plan presented herein is designed so that further maintenance and controls of the Storage Facility (2233) and the Storage Magazine (0312) will not be required. The objectives of the closure plans for the two RCRA facilities are to achieve clean closure by minimizing threats to human health and the environment, preventing the release of hazardous wastes or hazardous waste constituents, contaminated rainfall, or waste decomposition to the soil, groundwater, or atmosphere.

Initially, a facility investigation will be performed by using wipe samples to test for the presence of explosive materials. The results of the wipe test will be used to determine the method for decontamination to support offsite disposition of the building structures. Decontamination may be accomplished using power washing or manual techniques.

Next, the containerized wastes from the Storage Facility (2233) will be removed, the accessory equipment will be decontaminated and removed, and the pipelines, spill containment tanks, and secondary containment vaults will be decontaminated and drained. At the Storage Magazine (0312), the containerized wastes will be removed from the Storage Magazine (0312) and the magazine decontaminated.

After decontamination, the Storage Facility (2233) and the Storage Magazine (0312) will be demolished. The soil and groundwater at the Storage Facility (2233) and the Storage Magazine (0312) will be sampled and analyzed for chemicals of potential concern (COPCs), which may include volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, Title 22 metals, perchlorate, and explosives. The sampling will assess whether the soils and groundwater are below levels corresponding to a 10^{-6} increased cancer risk for residential exposure. The demolished facilities and any impacted soil will be disposed of offsite.

If evidence of spills or leaks is observed outside the secondary containment system during the closure process, additional samples may be taken and analyzed to determine the extent of the contamination, if any, in the soil and/or groundwater.

14.4 Maximum Waste Inventory

The maximum inventory of wastes in storage at any given time at the Storage Facility (2233) during the operating life of UTC is 400 55-gallon drums and 200 cubic yards of roll-off/bins. The maximum inventory of wastes in storage at any given time at the Storage Magazine (0312) during the operating life of UTC is 1,320 gallons of waste in each room (3,960 gallons total).

14.5 Inventory Removal and Disposal

In the event of closure of the Storage Facility (2233) or the Storage Magazine (0312), notice will be given to onsite waste generators that no new wastes will be accepted after a given time period. Within 60 days of receipt of the final volume of hazardous waste, all of the containers at the facility will be properly labeled and manifested, as appropriate, according to the procedures presented in Section 9. A licensed hazardous waste transporter will remove the containers from

the facility under the supervision of the Environmental Department, and will transport them to a permitted TSDF for ultimate disposal or treatment.

Hazardous wastes shall only be transported from UTC using California-approved transporters to only UTC-approved TSD Facilities. The TSD Facilities will require that individual waste profiles be submitted and approved for each waste stream prior to shipment. Each container shall be visually inspected prior to transportation to ensure that the container is properly labeled, marked, and manifested. The person who orders a transport vehicle shall make sure that the transporter is properly approved for transporting wastes. California law requires that hazardous waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing. A complete list of requirements is shown in 22 CCR Chapter 13. All other materials (non-hazardous wastes or recyclable materials) will be sent to appropriate facilities meeting applicable California State requirements. The final determination of wastes and associated TSD Facilities will be included in the Final Decontamination Closure Plan submitted to the DTSC during the closure process.

14.6 Facility Decontamination and Assessment

Decontamination of the two RCRA facilities will be supervised by an independent, registered professional engineer contracted to UTC to conduct the facility closure. Decontamination procedures for each facility are described below. Samples will be collected and analyzed for the COPCs discussed in Section 14.3 to verify that remaining soil and groundwater is at acceptable risk levels as discussed in the Sampling and Analysis Plan (SAP) in Appendix X. Sampling will also be performed under the direction of an independent, registered civil professional engineer.

14.6.1 Decontamination of the Storage Facility (2233)

Prior to decontamination of the Storage Facility (2233) and after the wastes are removed, a facility investigation will be performed that is limited to field test analyses using RFTK and EXPRAY of sheds and structures. Approximately 12 wipe samples will be collected for explosives. Results of wipe sampling will be used to determine the appropriate method for decontamination to support offsite disposition of the building structures.

All mobile equipment (including drum crusher) will be steamed-cleaned, or other appropriate method, on the pad to remove residues. The concrete storage pad and drum crusher pad will then be decontaminated by steam cleaning, or other appropriate method. If the decontaminated drum crusher is still operational, it may be sold. If the drum crusher is not operational, it may be sold as scrap metal. The wash water will be collected, drummed, labeled, profiled, and disposed of offsite.

Drainage lines from the concrete slab to the containment tanks will be decontaminated by line moling after slab decontamination. The containment tanks will be decontaminated by triple

rinsing with steam or hot water. The wash water will be drained from the tanks, drummed, labeled and disposed of as hazardous waste, if appropriate. The secondary containment vault will be decontaminated by steam cleaning. Wash water will be handled and disposed of as hazardous waste, if appropriate.

Two cores will be collected from facility floor. Cores will be collected of asphalt or concrete and analyzed for waste characterization purposes. Decontamination is not anticipated to be required of the pavement to support offsite disposition. It is assumed that pavement will be profiled as non-hazardous waste for offsite disposal.

Storage Facility (2233) buildings and sheds will be demolished or removed for offsite reuse following decontamination, if necessary. Demolition activities also include removal of the pavement, fencing, and utilities. All demolition debris will be hauled offsite for final disposal.

Following pavement removal, surface and subsurface soils at the Storage Facility (2233) will be characterized. The surface soil investigation will include approximately 40 samples taken from the surface to 1 foot bgs, 40 samples from 1-2 feet bgs. Subsurface investigation includes collection of a total of 30 samples from 10 locations sampled at 3 depth intervals between 2 feet and 20 feet bgs. Each soil sample will be analyzed for VOCs, SVOCs, pesticides, PCBs, metals, perchlorate, and explosives (nitroglycerine, nitroaromatics, and RDX). Samples will be collected either by hand auger or direct push methods.

If soil impacts are discovered, soil will be remediated using cost-effective methods. It is assumed that excavation will not be required due to the nature of the storage activities.

Groundwater sampling will be conducted at four existing groundwater monitoring wells to demonstrate clean closure of the unit. Samples will be analyzed for VOCs, SVOCs, metals, and perchlorate.

14.6.2 Decontamination of the Storage Magazine (0312)

Prior to decontamination of the Storage Magazine (0312) and after the wastes are removed, a facility investigation will be performed that is limited to field test analyses using RFTK and EXPRAY of the three separate rooms in the magazine that are used to store energetic wastes. Approximately 9 wipe samples will be colleted for explosives. Results of wipe sampling will be used to determine the appropriate method for decontamination to support offsite disposition of the building structures.

The floor, interior walls, and the ceiling of each room of the magazine will be decontaminated by steam cleaning, or other appropriate method, to support offsite disposition. The wash water will be collected, drummed, labeled, and disposed of as hazardous waste, if appropriate.

Cores will be collected of concrete or asphalt outside the rooms and analyzed for waste characterization purposes. Decontamination is not anticipated to be required of the pavement to support offsite disposition. It is assumed that pavement will be profiled as non-hazardous waste for offsite disposal.

The three rooms are covered by soil. The soil will be removed from the roofs and sides of each of the magazines. The soil will be profiled and delivered for offsite disposal. Approximately 20 confirmation samples will be collected following excavation of magazine soil and analyzed for VOCs, SVOCs, pesticides, PCBs, metals, perchlorate, and explosives (nitroglycerine, nitroaromatics, and RDX).

Once uncovered, the three rooms will be demolished or removed for offsite reuse following decontamination, if necessary. Demolition activities also include removal of the pavement and utilities. All demolition debris will be hauled offsite for final disposal.

Following pavement removal, surface and subsurface soils at the Storage Magazine (0312) will be characterized. The surface soil investigation will include approximately 20 samples taken from the surface to 1 foot bgs and 20 samples from 1-2 feet bgs. Subsurface investigation includes collection of a total of 30 samples from 10 locations sampled at 3 depth intervals between 2 feet and 20 feet bgs. Each soil sample will be analyzed for VOCs, SVOCs, pesticides, PCBs, metals, perchlorate, and explosives (nitroglycerine, nitroaromatics, and RDX). Samples will be collected either by hand auger or direct push methods.

If impacts are discovered, soil will be remediated using cost-effective methods. It is assumed that excavation will not be required due to the nature of storage activities.

Groundwater sampling will be conducted at an existing groundwater monitoring well to demonstrate clean closure of the unit. Samples will be analyzed for VOCs, SVOCs, metals, and perchlorate.

14.7 Verification of Integrity

Once the decontamination described above is satisfactorily completed, the closed RCRA facility will be certified to be decontaminated by an independent registered professional engineer.

14.8 Schedule for Closure

The US EPA and DTSC Regional Administrators will be notified by UTC 45 days before beginning final closure. Closure will begin no later than 30 days of receipt of the final volume of hazardous wastes. Completion of closure activities will be within 180 days of receipt of the final volume of wastes or after final approval of the Closure Plan by DTSC, which ever occurs last. Final closure will be supervised and certified by a professional engineer and by the owner/operator.

Within 60 days of completion of closure, UTC will submit to DTSC, by registered mail, a certification that the hazardous waste management unit has been closed in accordance with the specifications in the approved closure plan. The certification shall be signed by the owner and by an independent California-registered civil profession engineer. Documentation supporting the independent California-registered civil profession engineer's certification will be submitted to DTSC.

The anticipated final closure for the two RCRA facilities is the year 2009. Tables 14-1 and 14-2 provide the anticipated schedule for closure of the Storage Facility (2233) and the Storage Magazine (0312). The schedules are presented in days from when wastes are last accepted.

TABLE 14-1
ANTICIPATED CLOSURE SCHEDULE FOR THE STORAGE FACILITY (2233)

Description	Start Date	End Date*
Final receipt of drummed wastes.	---	0
Final removal of drummed wastes.	0 days	60 days
Drain containment tanks and secondary containment vault. Dispose of liquid, if present.	45 days	60 days
Decontaminate storage sheds, drum crusher, equipment, pads, and secondary containment vault. Collect wipe samples.	60 days	75 days
Decontaminate drainage lines and containment tanks. Sample final rinse waters.	60 days	75 days
Core and sample concrete storage pad, drum crusher pad, secondary containment vault, and soil.	75 days	90 days
Evaluate analytical results. Design cleanup, if required.	90 days	120 days
Remove containment tanks. Demolish pad and remove top 2 feet of soil. Perform any needed cleanup.	120 days	150 days
Certification of closure by independent engineer and submission of final closure report.	150 days	180 days

*May have to be adjusted based upon final Agency approval of the Closure Plan. Start and end dates are number of days after final receipt of drummed waste.

TABLE 14-2
ANTICIPATED CLOSURE SCHEDULE
FOR THE STORAGE MAGAZINE (0312)

Description	Start Date	End Date*
Final receipt of wastes	---	0
Final removal of wastes	0 days	60 days
Decontaminate interior walls, ceiling, and floor. Collect wipe samples.	45 days	60 days
Remove soil above magazines and magazine ceilings.	60 days	75 days
Core and sample concrete magazine floors and soil.	75 days	90 days
Evaluate analytical results. Design cleanup, if required.	90 days	120 days
Remove containment tanks. Demolish pad and remove top 2 feet of soil. Perform any needed cleanup.	120 days	150 days
Certification of closure by independent engineer and submission of final closure report	150 days	180 days

*May have to be adjusted based upon final Agency approval of the Closure Plan.

14.9 Closure Cost Estimate

Closure costs for the Storage Facility (2233) and the Storage Magazine (0312) are estimated to be $1,131,388 and $525,120, respectively, in Net Present Value based on 2006 dollars.

	Storage Facility (2233)	Storage Magazine (0312)
Soil Excavation	--	$44,030
Facility Investigation	$266,778	$179,910
Demolition	$501,503	$46,231
Documentation	$13,337	$20,409
Subtotal	$781,618	$290,580
Markups and Contingency	$349,770	$234,540
Total	$1,131,388	$525,120

Estimates were generated by a third party, BBLES, and are included in Appendix W. The closure costs will be annually adjusted for inflation. Appendix V provides the financial documents used to verify UTC financial assurances in meeting these costs. The following general assumptions were used to prepare the closure cost estimate:

- All soil, concrete, and decontamination samples are assumed to meet the closure performance standards.
- All debris (concrete, rebar, asphalt, metal, and other) removed during closure will be disposed of offsite as nonhazardous waste at a Class III landfill, and are assumed to meet the landfill's acceptance criteria (i.e., no pre-disposal treatment is needed).
- An independent, professional engineer licensed in the State of California will be onsite for portions of the closure. The decontamination and sampling activities will be performed under the direction of the independent, registered civil professional engineer.
- Values are in Net Present Value based on 2006 dollars.
- Direct costs are in Net Present Value using a net discount of 1.6%.
- Contingency is 15% of direct costs.
- Markups are the Net Present Value of 7% of the direct costs.
- Markups are 7% of direct costs.
- Assume clean closure of the Storage Magazine (0312).

- Assume clean closure of the Storage Facility (2233).

- Costs were generated from the output of Remedial Actions Cost Engineering Requirements (RACER) software 2006, version 8.1.2. Append W contains the supporting RACER documentation.

The contact person for the RACER estimates is Ms. Rebecca Lindeman, P.E. Her telephone number is 303-231-9115.

14.10 Closure Plan Amendments

The closure plan will be amended whenever:

- Changes in operating plans, waste management unit design, or waste types stored affect the Closure Plan;

- The expected year of closure changes;

- Unexpected events occur during final activities that require modification of the approved Closure Plan; and/or

- Changes in federal or state laws or regulations affect the Closure Plan.

14.11 Regulatory Agency Notification Before Closure

The DTSC and the US EPA Regional Administrator will be notified in writing at least 45 days prior to the date that closure operations are planned to begin.

15 FINANCIAL RESPONSIBILITY

This section pertains to regulations 22 CCR §66270.14(B)(17) and (19), and §66264.147.

15.1 Financial Assurance of Closure Costs

In compliance with financial requirements specified in 40 CFR Sections 264.143, 264.145, and 264.147 and equivalent state requirements, the following financial assurance documentation is contained in Appendix V:

- A March 31, 2006, transmittal from United Technologies Corporation to DTSC, submitting the most recent assurance documentation.

- A copy of the UTC 2005 Annual Report.

These documents are submitted by UTC to the appropriate regulatory agencies annually. The next annual submittal will update the documentation with the most recent information; for example, the current closure cost estimates.

16 CORRECTIVE ACTION

This section pertains to regulations 22 CCR §66270.14(D)(1) and §66264.801.

UTC is actively implementing a program to address past releases of hazardous constituents from Solid Waste Management Units (SWMUs) at the UTC facility. This program is being carried out under the supervision of RWQCB. Appendix S contains the following agency clean-up orders that provide a description of UTC's remedial program:

RWQCB SCR Order No. R2-2004-0032: This Site Cleanup Requirements Order, adopted by the RWQCB on May 19, 2004, presents a discussion of site investigation history, site geology, and site hydrogeology. The order presents regulatory requirements, cleanup standards, and constituents of concern. Attached to the order is a specified groundwater and surface water self-monitoring program that UTC is required to follow for the purposes of supplying data to guide the continued implementation of the remediation program.

US EPA Consent Agreement and Final Order, US EPA Docket No. 09-89-0018: This order, signed February 22, 1991 required that UTC define the magnitude and extent of contamination within and beyond the facility boundary. This characterization was done by performing a RCRA facility investigation and subsequent corrective measures study. The scope of the order included characterization of:

- Geology and hydrogeology;
- Existence, nature and extent of groundwater contamination;
- Existence, nature and extent of surface water contamination;
- Existence, nature and extent of soil contamination;
- Pathways of contamination;
- Sources of contamination;
- Actual and potential receptors; and
- Development of remedial alternatives.